FILE 'HCAPLUS' ENTERED AT 14:17:49 ON 31 OCT 2008

L1	0	S	DANAPROID
L2	164	S	DANAPAROID
L3	137794	S	PULMONARY OR ASTHMA OR COPD OR (CHRONIC OBSTRUCTIVE PULMONARY
L4	7	S	L2 AND L3
L5	422	S	JET MILLING
L6	0	S	L2 AND L5
L7	4	S	ULTRASONIC NEBULISER
L8	550	S	ULTRASONIC NEBULIZER
L9	0	S	L2 AND L8
L10	41338	S	INHALATION OR INHALEABLE
L11	42345	S	INHALATION OR INHALABLE
L12	19	S	L5 AND L11
L13	60	S	L8 AND L11
L14	6	S	L12 AND (PY<2003 OR AY<2003 OR PRY<2003)
L15	38	S	L13 AND (PY<2003 OR AY<2003 OR PRY<2003)
L16	23208	S	SPRAY(W)(DRIER OR DRIED OR DRYING)
L17	3	S	L8 AND L16
L18	613	S	DRY POWDER INHALER
L19	539785	S	DEXTRAN OR DEXTRIN OR GLUCOSE OR MANNITOL
L20	540341	S	L18 OR L19
L21	57	S	L18 AND L19
L22	17	S	L21 AND (PY<2003 OR AY<2003 OR PRY<2003)

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=> file hcaplus
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                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

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FILE COVERS 1907 - 31 Oct 2008  VOL 149 ISS 19
FILE LAST UPDATED: 30 Oct 2008  (20081030/ED)

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the second quarter of 2008.

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 substance identification.

=> s danaproid
L1            0 DANAPROID

=> s danaparoid
L2          164 DANAPAROID

=> s pulmonary or asthma or COPD or (chronic obstructive pulmonary disease)
         104418 PULMONARY
          41650 ASTHMA
           4343 COPD
         249163 CHRONIC
          15735 OBSTRUCTIVE
         104418 PULMONARY
        1105837 DISEASE
           8595 CHRONIC OBSTRUCTIVE PULMONARY DISEASE
                  (CHRONIC(W)OBSTRUCTIVE(W)PULMONARY(W)DISEASE)
L3       137794 PULMONARY OR ASTHMA OR COPD OR (CHRONIC OBSTRUCTIVE PULMONARY
                DISEASE)

=> s l2 and l3
L4            7 L2 AND L3

=> s jet milling
         136566 JET
          57207 MILLING
L5          422 JET MILLING
                  (JET(W)MILLING)
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=> s l2 and l5
L6            0 L2 AND L5

=> s ultrasonic nebuliser
         79742 ULTRASONIC
            61 NEBULISER
L7           4 ULTRASONIC NEBULISER
                 (ULTRASONIC(W)NEBULISER)

=> d l7 1-4 ti abs bib

L7   ANSWER 1 OF 4  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Coating of textile fabrics with nanoparticles
AB   There is a permanent demand for improvement of protective fabrics.  More
     in particular there is much interest in flexible body armour that offers
     excellent protection properties against lethal projectiles and explosive
     fragments while maintaining comfort properties such as light weight,
     flexibility and vapor permeability.  Several methods have been
     investigated.  The usual method to increase protection is to add more
     layers of fabrics or ceramic inserts at the expense of increased weight of
     the armour and reduced mobility of the wearer.  Alternatives like
     impregnation with shear thickening fluids containing nanomaterials have been
     proposed to avoid this decrease of flexibility.  We propose a new method
     to deposit nanoparticles individually on textile fibers using an atmospheric
     pressure dielec. barrier discharge plasma.  Nanoparticles are injected via
     an ultrasonic nebuliser in the plasma reactor where
     they are coated with a thin polymer layer.  Initial results of innovative
     method are presented by characterization of particle coated textile fabric
     samples of cotton, polyethylene and aramid.
AN   2007:1301922  HCAPLUS <<LOGINID::20081031>>
TI   Coating of textile fabrics with nanoparticles
AU   Marino, E.; Huijser, T.; Creyghton, Y.
CS   TNO Defence, Security and Safety, Rijswijk, 2280 AA, Neth.
SO   Nanopolymers 2007, International Conference, 1st, Berlin, Germany, June
     12-13, 2007 (2007), 18/1-18/10 Publisher: Rapra Technology Ltd.,
     Shrewsbury, UK.
     CODEN: 69KBJV; ISBN: 978-1-84735-016-9
DT   Conference
LA   English
RE.CNT  11    THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7   ANSWER 2 OF 4  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Preparation of Tl: HTSC film by chemical spraypyrolysis technique using
     ultrasonic nebuliser
AB   Tl: HTSC films have been prepared by chemical spray pyrolysis technique
     employing ultrasonic nebulizer on MgO (100) and ZrO2 (100) single crystal
     substrates through precursor route keeping in view the toxicity of
     thallium vapor.  The Tc (R = 0) of Tl: HTSC films on MgO (100) and ZrO2
     (100) are .apprx. 98 K and .apprx. 88 K resp.  Further
     structural-microstructural correlation have been done through XRD and SEM.
AN   2005:531357  HCAPLUS <<LOGINID::20081031>>
DN   143:257801
TI   Preparation of Tl: HTSC film by chemical spraypyrolysis technique using
     ultrasonic nebuliser
AU   Sharma, A. K.; Verma, K. K.
CS   Department Of Physics And Electronics, Dr. R.M.L. Avadh University,
     Faizabad, 224001, India
SO   Acta Ciencia Indica, Physics (2004), 30(3), 277-280
     CODEN: ACIPD2; ISSN: 0253-732X
PB   Pragati Prakashan
```

DT Journal
LA English
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN
TI A rapid and accurate method for the determination of plutonium in food using magnetic sector ICP-MS with an ultra-sonic nebuliser and ion chromatography
AB In the event of a nuclear incident it is essential that anal. information on the distribution and level of contamination is available. An ICP-MS method is described which can provide data on plutonium contamination in food within 3 h of sample receipt without compromising detection limits or accuracy relative to traditional counting methods. The method can also provide simultaneous detns. of americium and neptunium. Samples were prepared by HNO3 closed-vessel microwave digestion, evaporated to dryness and diluted into a mobile phase comprising 1.5 M HNO3 and 0.1 mM 2,6-pyridinedicarboxylic acid. A com. available polystyrene-divinylbenzene ion chromatog. column provides online separation of 239Pu and 238U reducing the impact of the 238U1H interference. Oxidation of the sample using H2O2 ensures all Pu is in the Pu+4 state. The oxidation also displaces Np away from the solvent front by changing the oxidation state from Np+3 to Np+4 and produces the insol. Am+4 ion. Simultaneous Pu, Am and Np analyses therefore require omission of the oxidation stage and some loss of Pu data quality. Analyses were performed using a magnetic sector ICP-MS (Finnigan MAT Element). The sample is introduced to the plasma via an ultrasonic nebuliser-desolvation unit (Cetac USN 6000AT+). This combination achieves an instrumental sensitivity of 238U > 2 + 107 cps/ppb and removes hydrogen from the sample gas, which also inhibits the formation of 238U1H. The net effect of the improved sample introduction conditions is to achieve detection levels for Pu of 0.020 pg g-1 (4.6 + 10-2 Bq kg-1) which is significantly below 1/10th of the most stringent EU (European Union) legislation, currently 0.436 pg g-1 (1 Bq kg-1) set for baby food. The new method was evaluated with a range of biol. samples ranging from cabbage to milk and meat. Recovery of Pu agrees with published values (100% ± 20%).
AN 2003:60654 HCAPLUS <<LOGINID::20081031>>
DN 139:81338
TI A rapid and accurate method for the determination of plutonium in food using magnetic sector ICP-MS with an ultra-sonic nebuliser and ion chromatography
AU Evans, P.; Elahi, S.; Lee, K.; Fairman, B.
CS LGC Ltd, Teddington, TW11 0LY, UK
SO Journal of Environmental Monitoring (2003), 5(1), 175-179
CODEN: JEMOFW; ISSN: 1464-0325
PB Royal Society of Chemistry
DT Journal
LA English
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Analysis of Hg, Pb, V and Ni in condensates and naphta by ICP-MS.
AB The performance of ICP-MS and the Cetac ultrasonic nebuliser-desolvator system for the anal. of Hg, Pb, V and Ni in condensates and naphta will be discussed. The Cetac system improved the sensitivity for V and Ni by a factor of about 40. The results are compared with those obtained using graphite furnace atomic absorption spectrometry (GFAAS) and cold vapor atomic absorption spectrometry (cv AAS) in an inter laboratory study of naphtas. Volatile species such as Et4Pb and Me2Hg were lost in the desolvation unit when using the Cetac system.

Volatilisation effects were not observed when using the conventional Meinhardt-Scott chamber ICP-MS system.
AN 1998:141466 HCAPLUS <<LOGINID::20081031>>
TI Analysis of Hg, Pb, V and Ni in condensates and naphta by ICP-MS.
AU Olsen, S. D.
CS RF-Rogaland Research, Stavanger, 4004, Norway
SO Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 (1998), PETR-084 Publisher: American Chemical Society, Washington, D. C. CODEN: 65QTAA
DT Conference; Meeting Abstract
LA English

=> s ultrasonic nebulizer
79742 ULTRASONIC
3967 NEBULIZER
L8 550 ULTRASONIC NEBULIZER
(ULTRASONIC(W)NEBULIZER)

=> s l2 and l8
L9 0 L2 AND L8

=> d l4 1-7 ti abs bib

L4 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
TI A comparison of the effects of unfractionated heparin, dalteparin and danaparoid on vascular endothelial growth factor-induced tum-our angiogenesis and heparanase activity
AB Disseminated intravascular coagulation (DIC) is the most common complication of solid tumors. In this study, the effectiveness of three polysaccharide anticoagulants (PSAs), at therapeutic doses, at inhibiting solid tumor growth was investigated. Mice with tumor xenografts were s.c. injected with either unfractionated heparin (UFH; 200 units kg-1 day-1), dalteparin (75 units kg-1 day-1) or danaparoid (50 units kg-1 day-1). At these concns., these PSAs are equally effective at inhibiting blood coagulation activated factor X. In mice with Lewis lung carcinoma (LLC) tumors dalteparin and, to a lesser extent, UFH inhibited both tumor growth and angiogenesis, whereas danaparoid did not. In contrast, in mice with KLN205 tumors, all the PSAs inhibited tumor growth and angiogenesis. All the PSAs significantly inhibited proliferation, migration of endothelial cells and vessel formation in matrigel plugs containing vascular endothelial growth factor (VEGF) and there were no significant differences between these effects of the PSAs. The PSAs had no effect on endothelial cell tubular formation in vitro. Although all the PSAs inhibited VEGF production in KLN205 tumors in vivo and cells in vitro, in LLC tumors and cells only UFH and dalteparin inhibited VEGF production, whereas danaparoid did not. In both LLC and KLN205 tumors in vivo, heparanase activity was inhibited by UFH and dalteparin, but not by danaparoid. Hence, UFH and dalteparin may be more effective than danaparoid at inhibiting cancer progression in DIC patients with solid tumors, due at least in part to their ability to suppress VEGF and heparanase in tumors.
AN 2005:1058844 HCAPLUS <<LOGINID::20081031>>
DN 143:359643
TI A comparison of the effects of unfractionated heparin, dalteparin and danaparoid on vascular endothelial growth factor-induced tum-our angiogenesis and heparanase activity
AU Takahashi, Hidenori; Ebihara, Satoru; Okazaki, Tatsuma; Asada, Masanori; Sasaki, Hidetada; Yamaya, Mutsuo
CS Department of Geriatric and Respiratory Medicine, Tohoku University School of Medicine, Aoba-ku, Sendai, 980-8574, Japan

SO British Journal of Pharmacology (2005), 146(3), 333-343
CODEN: BJPCBM; ISSN: 0007-1188
PB Nature Publishing Group
DT Journal
LA English
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Pharmaceutical compositions
AB The present invention relates to pharmaceutical compns. which are useful in the treatment of diseases where excess mucus is present in the respiratory tract, such as cystic fibrosis and chronic obstructive pulmonary disease. In particular, the invention relates to pharmaceutical compns. for administration by pulmonary inhalation. Thus, in a first aspect of the present invention, a composition for assisting mucus clearance is provided, the composition comprising one or more mucoactive agents for reducing crosslinking within the mucus; for diluting the mucus; and/or for digesting naked DNA and cell debris within the mucus. Preferably, the composition according to the invention further has the effect of reducing inflammation. In one embodiment of the present invention, the composition comprises one or more mucoactive agents together with an addnl. active agent such as an anti-inflammatory agent. In a particularly preferred embodiment of the present invention, the mucoactive agent for reducing crosslinking is a glycosaminoglycan such as heparin. A further group of mucoactive agents capable of assisting mucus clearance are amino acids. Acetylcysteine (NAC) and the acetylcysteine salt derivative Nacystelyn (or NAL) are also effective mucoactive agents which are suitable for inclusion in the compns. of the present invention.
AN 2005:259852 HCAPLUS <<LOGINID::20081031>>
DN 142:329858
TI Pharmaceutical compositions
IN Morton, David; Ganderton, David; Staniforth, John; Kamlag, Yorick
PA Vectura Limited, UK
SO PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005025540	A2	20050324	WO 2004-GB3932	20040915
	WO 2005025540	A3	20050616		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004271778	A1	20050324	AU 2004-271778	20040915
	CA 2538399	A1	20050324	CA 2004-2538399	20040915
	EP 1663151	A2	20060607	EP 2004-768478	20040915
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				

	BR 2004014425	A	20061114	BR 2004-14425	20040915
	CN 1874757	A	20061206	CN 2004-80032679	20040915
	JP 2007505830	T	20070315	JP 2006-525902	20040915
	MX 2006PA02952	A	20060920	MX 2006-PA2952	20060315
	NO 2006001254	A	20060411	NO 2006-1254	20060317
	IN 2006CN01269	A	20070629	IN 2006-CN1269	20060413
	US 20070065373	A1	20070322	US 2006-571184	20060717
PRAI	GB 2003-21611	A	20030915		
	GB 2003-27723	A	20031128		
	WO 2004-GB3932	W	20040915		

L4 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Drugs comprising combination of elastase inhibitor with blood coagulation system and/or fibrinolysis system enzyme inhibitor
AB Disclosed is a drug comprising a combination of an elastase inhibitor, e.g. N-[o-(4-pivaloyloxybenzene)sulfonylaminobenzoyl]glycine sodium salt tetrahydrate, with a blood coagulation system and/or fibrinolysis system enzyme inhibitor, e.g. 6-guanidinocaproic acid 4-ethoxycarbonylphenyl ester mesylate, an aprotinin derivative, an antithrombin III derivative, a heparin derivative, a danaparoid sodium derivative, a hirudin derivative, a thrombomodulin derivative, a sulfated sugar or a nontoxic salt thereof. The above drug is useful in preventing and/or treating acute lung injury, disseminated intravascular coagulation and multiorgan failure in liver, kidney, etc. and improving the prognosis of a patient.
AN 2004:412832 HCAPLUS <<LOGINID::20081031>>
DN 140:412336
TI Drugs comprising combination of elastase inhibitor with blood coagulation system and/or fibrinolysis system enzyme inhibitor
IN Kawabata, Kazuhito; Matsumoto, Shigeru
PA Ono Pharmaceutical Co., Ltd., Japan
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004041309	A1	20040521	WO 2003-JP14198	20031107
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2006096668	A	20060413	JP 2002-324646	20021108
	AU 2003277608	A1	20040607	AU 2003-277608	20031107
PRAI	JP 2002-324646	A	20021108		
	WO 2003-JP14198	W	20031107		

OS MARPAT 140:412336
RE.CNT 177 THERE ARE 177 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Danaparoid for heparin-induced thrombocytopenia: an analysis of treatment failures
AB Background: Patients with heparin-induced thrombocytopenia (HIT) (with or

without thrombosis) require alternative anticoagulation because of their extreme risk of new thromboembolic complications. The first effective agent for this purpose may be danaparoid, a less-sulfated low mol. weight heparinoid. Recently, direct thrombin inhibitors have been used. Objective: Five HIT patients, who developed new thromboembolic complications while receiving danaparoid, were analyzed to consider possible reasons for treatment failure and to promulgate strategies that improve efficacy. Results: Three patients had acute HIT, one had recent HIT, and one with remote HIT was re-exposed to heparin during heart surgery. Danaparoid was started as i.v. bolus and infusion in one patient, and as 1250 units s.c. twice daily in four patients. The new complications that emerged on danaparoid were new venous thrombi in three patients (one with pulmonary emboli), lower extremity arterial thrombosis in one, myocardial ischemia in one, thromboembolic cardiovascular accidents in one, and fatal bowel necrosis in one (two patients suffered more than one complication). Platelet counts did not improve or worsened in four, improved partially in the other, and parameters of disseminated intravascular coagulation failed to improve in one patient. Four patients responded relatively dramatically when direct thrombin inhibitors were substituted. Possible reasons for danaparoid failure include that: (1) no treatment is expected to completely prevent complications, (2) antithrombin III consumption can blunt efficacy in some patients, (3) low or intermediate doses may be insufficient, and (4) there was clin. significant cross-reactivity of the pathogenic HIT antibodies. Conclusions: It is emphasized that the possibility of clin. significant antibody cross-reactivity and that low or intermediate dosage may be inadequate when using danaparoid in therapy of HIT. The latter problem probably extrapolates to other anticoagulants used for HIT.

AN 2003:728805 HCAPLUS <<LOGINID::20081031>>
DN 139:286055
TI Danaparoid for heparin-induced thrombocytopenia: an analysis of treatment failures
AU Kodityal, Sandeep; Manhas, Amit H.; Udden, Mark; Rice, Lawrence
CS The Department of Medicine, Section of Hematology, Baylor College of Medicine, Houston, TX, USA
SO European Journal of Haematology (2003), 71(2), 109-113
CODEN: EJHAEC; ISSN: 0902-4441
PB Blackwell Publishing Ltd.
DT Journal
LA English
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Management of venous thromboembolism: past, present, and future
AB A review. Venous thromboembolism, including deep vein thrombosis and pulmonary embolism, represents a significant source of morbidity and mortality in the United States and worldwide. The pharmacol. management of venous thromboembolic disease has witnessed significant advances since oral anticoagulant and heparin therapies began to gain widespread use more than 50 yr ago. Cumulative clin. experience gained from using these 2 classes of antithrombotic agents for the prevention and treatment of venous thromboembolism in high-risk patients pointed to a number of efficacy and safety limitations. This prompted further research and the eventual introduction, in the 1980s, of low-mol.-weight heparin(s) as a potentially superior therapeutic modality. Within the last decade the pace of development of newer classes of antithrombotic agents for venous thromboembolism prevention and treatment (as well as other indications) has accelerated. Among agents at late stages of investigation are ximelagatran (a direct thrombin inhibitor), nematode anticoagulant peptide

c2 (a tissue factor VIIa inhibitor), and sodium N-[8(2-hydroxylbenzoyl)amino]caprylate (SNAC)/heparin (a heparin derivative). The most recently approved agents for venous thromboembolism indications include the heparinoid, danaparoid sodium, and the newly introduced selective factor Xa inhibitor, fondaparinux.

AN 2003:341466 HCAPLUS <<LOGINID::20081031>>
DN 139:62482
TI Management of venous thromboembolism: past, present, and future
AU Hyers, Thomas M.
CS Department of Internal Medicine, Care Clinical Research, St Louis University School of Medicine, St Louis, MO, USA
SO Archives of Internal Medicine (2003), 163(7), 759-768
CODEN: AIMDAP; ISSN: 0003-9926
PB American Medical Association
DT Journal; General Review
LA English
RE.CNT 97 THERE ARE 97 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The potential role of new therapies in deep-vein thrombosis prophylaxis
AB A review with refs. The value of prophylaxis against venous thromboembolism (VTE) is increasingly accepted in most surgical specialties, although the potential reduction in fatal pulmonary embolism has recently been questioned. The burden of VTE in hospital patients nevertheless remains high, partly attributable to underuse of thromboprophylaxis and partly attributable to occurrence of VTE in high-risk patients because recommended antithrombotic therapies fail to provide full protection. Improved physician education has been shown to increase the application of antithrombotic measures, and research efforts are focused on developing novel antithrombotic agents with greater efficacy and safety in clin. use. Several novel indirect and direct thrombin inhibitors have been investigated. The heparinoid danaparoid has shown superiority over unfractionated heparin in several indications, but only the recombinant hirudin, desirudin, has exhibited greater efficacy than low-mol.-weight heparin (LMWH) in thromboprophylaxis for patients undergoing elective hip-replacement surgery, without increasing the risk of bleeding. Three large-scale clin. trials have shown desirudin to be the most effective thromboprophylactic agent currently available in elective hip-replacement surgery; this agent has now been licensed for use in orthopedic surgery. Research is ongoing into the feasibility of still more effective and convenient therapies, such as oral antithrombins.

AN 2001:525670 HCAPLUS <<LOGINID::20081031>>
DN 135:298041
TI The potential role of new therapies in deep-vein thrombosis prophylaxis
AU Wille-Jorgensen, Peer
CS Center for Clinical Thrombosis Research, Department of Surgical Gastroenterology K, H:S Bispebjerg Hospital, Copenhagen, DK-2400, Den.
SO Seminars in Hematology (2001), 38(2, Suppl. 5), 20-30
CODEN: SEHEA3; ISSN: 0037-1963
PB W. B. Saunders Co.
DT Journal; General Review
LA English
RE.CNT 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Danaparoid sodium
AB A review with 53 refs. Danaparoid sodium (Orgaran, Organon) is a heparinoid glycosamino-glycuronan antithrombotic agent approved for the

prophylaxis of post-operative deep vein thrombosis (DVT), which may lead to pulmonary embolism (PE) in patients undergoing elective hip replacement surgery. Danaparoid is a low mol. weight heparinoid consisting of a mixture of heparan sulfate (84%), dermatan sulfate (12%) and small amts. of chondroitin sulfate (4%), whose antithrombotic activity has been well established. Its pharmacol. effect is exerted primarily by inhibiting Factors Xa (FXa) and IIa (FIIa) at a ratio greater than heparin, with a minimal effect on platelet function. Danaparoid exhibits low cross-reactivity with heparin-induced antibodies when compared with heparin or low mol. weight heparins (LMWH), thereby making it an excellent choice for the management of heparin-induced thrombocytopenia (HIT). It has excellent bioavailability following s.c. injection. Danaparoid has little effect on routine coagulation tests (activated partial thromboplastin time [aPTT], prothrombin time [PT], and thrombin time [TT]). Patients with elevated serum creatinine should be monitored carefully. For its FDA approved indication (DVT prophylaxis during hip replacement surgery), its cost per day is approx. eight times more than LMWH. Even though monitoring is not routinely necessary according to the manufacturer for its approved indication, monitoring is frequently necessary when it is used in other clin. scenarios. Its higher cost than comparable therapies for DVT prophylaxis and the low availability of the FXa assay in most non-tertiary care hospitals has limited the widespread use of danaparoid. Danaparoid has been found to be effective in the treatment of HIT although this is an off label use, despite being the most frequent reason why danaparoid is used.

AN 2000:432654 HCAPLUS <<LOGINID::20081031>>
DN 133:37511
TI Danaparoid sodium
AU Acostamadiedo, Jose M.; Iyer, Uma G.; Owen, John
CS Wake Forest University School of Medicine, Winston-Salem, NC, 27157, USA
SO Expert Opinion on Pharmacotherapy (2000), 1(4), 803-814
CODEN: EOPHF7; ISSN: 1465-6566
PB Ashley Publications Ltd.
DT Journal; General Review
LA English
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s inhalation or inhaleable
41338 INHALATION
2 INHALEABLE
L10 41338 INHALATION OR INHALEABLE

=> s inhalation or inhalable
41338 INHALATION
1233 INHALABLE
L11 42345 INHALATION OR INHALABLE

=> s l5 and l11
L12 19 L5 AND L11

=> s l8 and l11
L13 60 L8 AND L11

=> s l12 and (PY<2003 or AY<2003 or PRY<2003)
22959121 PY<2003
4499363 AY<2003
3967608 PRY<2003
L14 6 L12 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l14 1-6 ti abs bib

L14 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Inhaled vaccines
AB In a method for creating an immune response, a vaccine is prepared in the form of a dry powder. The powder particles have an aerodynamic particle size range from 1-100 μ. A dose of powder is loaded into a dry powder inhaler. The dose is inhaled with an inspiratory flow rate of less than 60 L per min. A mucosal immune response is created via particles of the vaccine material depositing on the upper respiratory tract. A systemic immune response is created via particles of the vaccine material depositing into the deep lung. The vaccine material is size reduced by e.g., jet milling, into the desired range, yet vaccine potency is retained.
AN 2003:922581 HCAPLUS <<LOGINID::20081031>>
DN 139:386255
TI Inhaled vaccines
IN Licalsi, Cynthia; Ward, Gary; Greenspan, Bernard; Witham, Clyde
PA Quadrant Technologies Limited, UK
SO U.S., 9 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6651655	B1	20031125	US 2000-562798	20000502 <--
	MX 2001PA00623	A	20020604	MX 2001-PA623	20010117 <--
PRAI	US 2000-176525P	P	20000118	<--	
	US 2000-176530P	P	20000118	<--	
	US 2000-176587P	P	20000118	<--	
	US 2000-562798	A	20000502	<--	

RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Preparation of micronized crystalline tiotropium bromide monohydrate and formulation as inhalant to treat asthma and COPD
AB The invention relates to a micronized crystalline (1alpha, 2beta, 4beta, 5alpha, 7beta)-7-[(hydroxydi-2-thienylacetyl)oxy]-9,9-dimethyl-3-oxa-9-azoniatricyclo[3.3.1.02,4]nonane bromide, methods for the production thereof, and the use thereof for producing a medicament, particularly for producing a medicament having an anticholinergic effect. The preparation of tiotropium bromide monohydrate microcrystals includes the solution of tiotropium bromide in water, heating, clarification with active carbon, filtration and slow crystallization followed by micronization in an air jet mill under nitrogen atmospheric
and exposing the micronized crystals to water vapor. Parameters of the monocline crystals are given. Micronized crystalline tiotropium bromide monohydrate is formulated to encapsulated inhalation powder and used to treat asthma and COPD. Thus inhalation capsules contained (mg): micronized tiotropium bromide 0.0225; lactose monohydrate (200 M) 5.2025; lactose monohydrate (5 μm) 0.2750; hard gelatin capsules 49.0.
AN 2003:757705 HCAPLUS <<LOGINID::20081031>>
DN 139:265796
TI Preparation of micronized crystalline tiotropium bromide monohydrate and formulation as inhalant to treat asthma and COPD
IN Bender, Helmut; Graebner, Hagen; Schindler, Konrad; Trunk, Michael Josef Friedrich; Walz, Michael

PA Boehringer Ingelheim Pharma Gmbh & Co. Kg, Germany
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2003078429	A1	20030925	WO 2003-EP2422	20030310	<--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
	DE 10212264	A1	20031002	DE 2002-10212264	20020320	<--
	CA 2479652	A1	20030925	CA 2003-2479652	20030310	<--
	AU 2003212327	A1	20030929	AU 2003-212327	20030310	<--
	US 20040002510	A1	20040101	US 2003-385175	20030310	<--
	US 7309707	B2	20071218			
	EP 1487832	A1	20041222	EP 2003-708206	20030310	<--
	EP 1487832	B1	20070808			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
	BR 2003008513	A	20050104	BR 2003-8513	20030310	<--
	CN 1642952	A	20050720	CN 2003-806516	20030310	<--
	CN 100368410	C	20080213			
	JP 2005526776	T	20050908	JP 2003-576434	20030310	<--
	NZ 535808	A	20050930	NZ 2003-535808	20030310	<--
	EP 1785422	A1	20070516	EP 2007-102206	20030310	<--
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU					
	AT 369365	T	20070815	AT 2003-708206	20030310	<--
	ES 2291619	T3	20080301	ES 2003-708206	20030310	<--
	CN 101220025	A	20080716	CN 2008-10002435	20030310	<--
	ZA 2004005636	A	20051128	ZA 2004-5636	20040715	<--
	IN 2004DN02596	A	20070112	IN 2004-DN2596	20040903	<--
	MX 2004PA09056	A	20050125	MX 2004-PA9056	20040917	<--
	NO 2004004003	A	20041014	NO 2004-4003	20040923	<--
	HK 1078871	A1	20080808	HK 2005-110949	20051201	<--
	US 20070015785	A1	20070118	US 2006-532716	20060918	<--
	IN 2008DN03969	A	20080815	IN 2008-DN3969	20080508	<--
PRAI	DE 2002-10212264	A	20020320	<--		
	US 2002-413129P	P	20020924	<--		
	CN 2003-806516	A3	20030310			
	EP 2003-708206	A3	20030310			
	US 2003-385175	A1	20030310			
	WO 2003-EP2422	W	20030310			
	IN 2004-DN2596	A3	20040903			

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Inhalable aztreonam for treatment and prevention of pulmonary bacterial infections
AB A method and a composition are described for the treatment of pulmonary

bacterial infections caused by gram-neg. bacteria. The invention also relates to the treatment of infection caused by microorganisms such as Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa, Haemophilus influenzae, Burkholderia cepacia, Stenotrophomonas maltophilia, and multidrug resistant Pseudomonas aeruginosa by using a concentrated formulation of aztreonam, or a salt delivered as an aerosol or dry powder formulation. A purified aztreonam or a salt is milled to a powder having mass median average diams. ranging 1-5 μ by media milling, jet milling, spray drying, or particle precipitation techniques. Spray drying is achieved by spraying a fine mist of drug solution onto a support and drying the particles. The dry powder formulations are temperature stable and have a physiol. acceptable pH of 4.0-7.5, preferably 5.5 to 7.0, and long shelf-lives.

AN 2002:504571 HCAPLUS <<LOGINID::20081031>>
DN 137:83631
TI Inhalable aztreonam for treatment and prevention of pulmonary bacterial infections
IN Montgomery, Alan Bruce
PA Salus Pharma, Inc., USA
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002051356	A2	20020704	WO 2001-US50062	20011220 <--
	WO 2002051356	A3	20021031		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2433280	A1	20020704	CA 2001-2433280	20011220 <--
	AU 2002231244	A1	20020708	AU 2002-231244	20011220 <--
	AU 2002231244	B2	20060629		
	EP 1353647	A2	20031022	EP 2001-991523	20011220 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2001016757	A	20031104	BR 2001-16757	20011220 <--
	JP 2004516302	T	20040603	JP 2002-552504	20011220 <--
	NO 2003002946	A	20030826	NO 2003-2946	20030626 <--
	US 20080050439	A1	20080228	US 2007-729698	20070328 <--
PRAI	US 2000-258423P	P	20001227	<--	
	US 2001-27113	A3	20011220	<--	
	WO 2001-US50062	W	20011220	<--	
	US 2003-654815	A1	20030904		

L14 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Determination of surface free energy of interactive dry powder liposome formulations using capillary penetration technique
AB The surface free energy of interactive dry powder formulations consisting of varying ratios of lactose plus liposomal ciprofloxacin were determined using capillary penetration technique. Powder is produced by jet-milling after mixing with lyophilized liposomal ciprofloxacin with inhalation grade lactose powder (Pharmatose 325M). Measurement of the weight gained during intrusion of different liqs. in a packed column of

powder is combined with dynamic considerations to give the surface free energy, γsv. Confidence in methodol. was gained by determining γsv for PMMA microspheres and comparing to literature values. Values of γsv are then obtained for unmilled Pharmatose 325M powder (γsv=54.2 mJ m-2), milled Pharmatose 325M (γsv=54.2 mJ m-2) and lipid:lactose formulations with weight ratios of 1:5, 1:10 and 1:20. All the powder liposomal formulations are found to have the same γsv=48.0 mJ m-2, suggesting that adhesive forces in the three interactive powders should be similar barring any confounding roughness effects.

AN 2001:503245 HCAPLUS <<LOGINID::20081031>>
DN 136:374686
TI Determination of surface free energy of interactive dry powder liposome formulations using capillary penetration technique
AU Desai, T. R.; Li, D.; Finlay, W. H.; Wong, J. P.
CS Department of Mechanical Engineering, University of Alberta, Edmonton, AB, T6G 2G8, Can.
SO Colloids and Surfaces, B: Biointerfaces (2001), 22(2), 107-113
CODEN: CSBBEQ; ISSN: 0927-7765
PB Elsevier Science B.V.
DT Journal
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Size reduction of peptides and proteins by jet-milling
AB A review with 19 refs. Proteins and peptides may be isolated in the solid state as small particles for delivery to the respiratory tract by various techniques including jet milling. We have demonstrated for a number of macromols. that jet milling is an efficient technique to size reduce proteins and peptides for subsequent formulation as powders for inhalation to be delivered to the lung via the Spiros dry powder inhaler (DPI). The compds. that have been jet milled at Dura have very small particle sizes with narrow size distributions and our experience has shown that they retain their biol. activity.
AN 1999:800610 HCAPLUS <<LOGINID::20081031>>
DN 132:112866
TI Size reduction of peptides and proteins by jet-milling
AU Phillips, Elaine; Allsopp, Eric; Christensen, Troy; Fitzgerald, Melissa; Zhao, Lu
CS Dura Pharmaceuticals, San Diego, CA, USA
SO Respiratory Drug Delivery VI: Biological, Pharmaceutical, Clinical and Regulatory Issues Relating to Optimized Drug Delivery by Aerosol, the International Symposium, 6th, Hilton Head, S. C., May 3-7, 1998 (1998), 161-168. Editor(s): Dalby, Richard N.; Byron, Peter R.; Farr, Stephen J. Publisher: Interpharm Press, Inc., Buffalo Grove, Ill.
CODEN: 68LUA9
DT Conference; General Review
LA English
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Preparation of sodium chloride aerosol formulations
AB Disclosed herein is a method for the preparation of NaCl formulation having a substantially uniform particle size suitable to ensure the dispersible properties for inhalation into the lungs of a subject. The formulations thus prepared are also the subject of this disclosure. The method involves jet milling coarse NaCl in one or

preferably two or more procedures using air pressure suitable to produce particles having a significant fraction that are less than about 7 μm in size. Immediately following the milling, the particles are vacuum-dried in an oven using a temperature and time suitable to cure the product to prevent substantial aggregation over time. Micronization of NaCl crystals was done using a Trost jet mill. The twice-milled powder was collected and dried at 176° for 1 h. The particle size distribution after dispersion was measured by aerosolizing the powder into a multiple stage liquid impinger from an conventional inhaler.

AN 1996:705748 HCAPLUS <<LOGINID::20081031>>
DN 125:339052
OREF 125:63187a,63190a
TI Preparation of sodium chloride aerosol formulations
IN Clark, Andrew R.; Hsu, Chung C.; Walsh, Andrew J.
PA Genentech, Inc., USA
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9631221	A1	19961010	WO 1996-US3528	19960313 <--
	W: AU, CA, JP, NZ				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5747002	A	19980505	US 1995-416998	19950405 <--
	CA 2217047	A1	19961010	CA 1996-2217047	19960313 <--
	CA 2217047	C	20021105		
	AU 9653115	A	19961023	AU 1996-53115	19960313 <--
	AU 717839	B2	20000406		
	EP 819006	A1	19980121	EP 1996-909702	19960313 <--
	EP 819006	B1	20030514		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 10510292	T	19981006	JP 1996-530306	19960313 <--
	JP 3427121	B2	20030714		
	AT 240111	T	20030515	AT 1996-909702	19960313 <--
PRAI	US 1995-416998	A	19950405	<--	
	WO 1996-US3528	W	19960313	<--	

=> s l13 and (PY<2003 or AY<2003 or PRY<2003)
22959121 PY<2003
4499363 AY<2003
3967608 PRY<2003
L15 38 L13 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l15 1-38 ti abs bib

L15 ANSWER 1 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Effect of catechin inhalation therapy on control of MRSA
AB Theaflan 30 [catechin preparation containing ≥30% tea polyphenol and ≥10% (-)-epigallocatechin gallate (EGCg)] was dissolved in physiol. saline and used as a catechin inhalation solution (CIS). The CIS was inhaled to 26 MRSA pos. patients 3 times a day at 10 mg/10 mL or 20 mg/20 mL using an ultrasonic nebulizer for 79 days or until being confirmed MRSA eradication in 2 consecutive bacteriol. examns. MRSA eradication was ascertained in 13 patients (68.4%). Average 24 days were needed until the bacteriol. examination became neg. By the induction of catechin inhalation therapy, quantities of vancomycin and arbekacin used was decreased in about 6.6 millions on a drug-price basis

year-to-year comparison.
AN 2002:362539 HCAPLUS <<LOGINID::20081031>>
DN 136:318868
TI Effect of catechin inhalation therapy on control of MRSA
AU Hirano, Sayuri; Muto, Rie; Ikeda, Tsutomu; Watanabe, Manabu
CS Department of Pharmacy, Saiseikai Wakakusa Hospital, Kanagawa, Japan
SO Nippon Byoin Yakuzaishikai Zasshi (2002), 38(4), 441-443
CODEN: NBYZEB; ISSN: 1341-8815
PB Nippon Byoin Yakuzaishikai
DT Journal
LA Japanese

L15 ANSWER 2 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Urinary excretion reflects lung deposition of aminoglycoside aerosols in cystic fibrosis
AB Using nebulization to deliver aminoglycosides may be of benefit in cystic fibrosis (CF) patients colonized by Pseudomonas aeruginosa. However, one problem with this route is the absence of clin. parameters allowing estimation of the mass of drug deposited in the lungs (MDL). The aim of this study was to assess whether aminoglycoside excretion in the urine reflects the MDL. Fourteen studies were performed in seven CF patients. Amikacin was mixed with albumin labeled with 99mTc and nebulized with an ultrasonic nebulizer. The MDL was determined by the mass-balance technique. Urine was collected during the 24 h following inhalation and was assayed for amikacin by fluorescence polarization immunoassay (FPIA). The mean±SEM MDL was 14.0±2.2% of the nebulizer charge. The mean±SEM amount of amikacin excreted in the urine was 20.9±4.5 mg and correlated with the MDL (r=0.93; p=0.0001). There was, however, wide intersubject variability in both deposition and excretion in the urine. Monitoring excretion of aminoglycosides in the urine allows noninvasive estimation of the mass of drug deposited in the lung in cystic fibrosis patients, which might be useful to assess the dose-response relationship in groups of patients, but intersubject variability prevents its use for individual follow-up.
AN 2001:679025 HCAPLUS <<LOGINID::20081031>>
DN 135:366304
TI Urinary excretion reflects lung deposition of aminoglycoside aerosols in cystic fibrosis
AU Dequin, P-F.; Faurisson, F.; Lemarie, E.; Delatour, F.; Marchand, S.; Valat, C.; Boissinot, E.; de Gialluly, C.; Diot, P.
CS Inserm EMI-U 00-10, Medical Intensive Care Unit and Dept of Respiratory Diseases, Bretonneau University Hospital, University of Tours, Tours, Fr.
SO European Respiratory Journal (2001), 18(2), 316-322
CODEN: ERJOEI; ISSN: 0903-1936
PB European Respiratory Society
DT Journal
LA English
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 3 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Experimental models of acute respiratory distress syndrome: clinical relevance and response to surfactant therapy
AB This is a review with 20 refs. Surfactant therapy for acute respiratory distress syndrome (ARDS) has shown encouraging results in animal studies, but not always in clin. trials. Efficacy of this therapy may be limited to ARDS caused by indirect injury, but misming of its application in clin. trials may be responsible for the discouraging results. In addition, the therapy may not last long enough to be effective. In rats with acidified milk aspiration, the effects of aerosolized surfactant therapy followed by inhalation of aerosolized dextran (mol. weight, 40,000)

last significantly longer than those of aerosolized surfactant therapy alone. This mode of surfactant therapy could lead to better results since it can be started and repeated at any time.

AN 2001:469179 HCAPLUS <<LOGINID::20081031>>
DN 135:266545
TI Experimental models of acute respiratory distress syndrome: clinical relevance and response to surfactant therapy
AU Kobayashi, Tsutomu; Tashiro, Katsumi; Cui, Xiaoguang; Konzaki, Tomoharu; Xu, Yongmei; Kabata, Chiharu; Yamamoto, Ken
CS Department of Anesthesiology and Intensive Care Medicine, Kanazawa University, Kanazawa, 920-8641, Japan
SO Biology of the Neonate (2001), 80(Suppl. 1), 26-28
CODEN: BNEOBV; ISSN: 0006-3126
PB S. Karger AG
DT Journal; General Review
LA English
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 4 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Administration method of Ca-DTPA by inhalation as an emergency medical treatment
AB For human application at the accidental intake of radioactive nuclides, the study was performed to determine an administration method of Ca-DTPA by inhalation as an emergency medical treatment. Ca-DTPA aerosol was generated by an ultrasonic nebulizer from solution in an ampule for injection, and inhalation was forced into a human airway model under the condition of a tidal volume of 950 mL and respiratory rate of 12/min. As a result, the optimum dilution of Ca-DTPA solution was three times to produce the aerosol successfully at the rate of 73 mg/min. Forty-six percent of generated Ca-DTPA aerosol deposited in the airway model, and twenty-six percent of that deposited in the trachea and lung region. Based on the data, it was calculated that, by inhalation for fifteen minutes, 500 mg of DTPA was inhaled and the amount of 130 mg deposited in a part of trachea and lung which is considered the effective level for removal of actinides. The results indicate that administration method of Ca-DTPA aerosol by inhalation using an ultrasonic nebulizer is useful for an emergency treatment.
AN 2001:293854 HCAPLUS <<LOGINID::20081031>>
DN 134:322792
TI Administration method of Ca-DTPA by inhalation as an emergency medical treatment
AU Koizumi, Akira; Fukuda, Satoshi; Yamada, Yuji; Iida, Haruzo; Shimo, Michikuni
CS Div. Radiotoxicol. Protect., Natl. Inst. Radiol. Sci., 4-9-1, Anagawa, Inage-ku, Chiba, 263-8555, Japan
SO Hoken Butsuri (2001), 36(1), 45-50
CODEN: HOKBAQ; ISSN: 0367-6110
PB Nippon Hoken Butsuri Gakkai
DT Journal
LA Japanese

L15 ANSWER 5 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Ultrasonic versus jet nebulization of iloprost in severe pulmonary hypertension
AB Inhalation of iloprost, a stable prostacyclin analog, is a promising perspective in the treatment of pulmonary hypertension. In initial clin. studies, a conventional jet nebulizer system was successfully used to decrease pulmonary vascular resistance and pressure,

requiring however, up to 12 inhalations of 12-15 min/day. The aim of this study was to investigate if the application of an equal dose iloprost at a drastically reduced duration of inhalation with the use of a more efficient ultrasonic nebulizer, leads to comparable hemodynamic effects, without escalation of side effects. The phys. features of the jet nebulizer system (Ilo-Neb) and the ultrasonic nebulizer (Multisonic Compact) were characterized by laser diffractometry and a Tc99m-tracer technique. Mass median aerodynamic diams. were 3.2 μm for the jet and 3.9 μm for the ultrasonic nebulizer. Total output was 60 μL·min-1 (jet) and 163 μL·min-1 (ultrasonic), and efficiency of the devices was 39 (jet) and 86% (ultrasonic). Based on these data, a total inhalative dose of 2.8 μg iloprost was delivered by jet nebulization within 12 min and by ultrasonic nebulization within 4 min, in 18 patients with severe primary and secondary pulmonary hypertension (New York Heart Association class III and IV), in a randomized crossover design. Hemodynamics were assessed by right heart catheterization. Inhalation with the ultrasonic device and jet nebulizer, reduced mean±SEM pulmonary artery pressure from 54.3 to 47.1 and from 53.5 to 47.0 mmHg, resp., and mean±SEM pulmonary vascular resistance from 1073 to 804 and from 1069 to 810 dynes cm-5, resp. Both modes of aerosolization were well tolerated. In conclusion, due to the markedly higher efficiency and output of the ultrasonic device, wastage of drug is largely avoided and the duration of inhalation can be shortened to one-third, with comparable hemodynamic effects and without enforcing side effects.

AN 2001:258905 HCAPLUS <<LOGINID::20081031>>
DN 136:58688
TI Ultrasonic versus jet nebulization of iloprost in severe pulmonary hypertension
AU Gessler, T.; Schmehl, T.; Hoeper, M. M.; Rose, F.; Ghofrani, H. A.; Olschewski, H.; Grimminger, F.; Seeger, W.
CS Dept of Internal Medicine, Justus-Liebig-University of Giessen, Giessen, D-35392, Germany
SO European Respiratory Journal (2001), 17(1), 14-19
CODEN: ERJOEI; ISSN: 0903-1936
PB European Respiratory Society
DT Journal
LA English
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 6 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI A review of the technical aspects of drug nebulization
AB A review with 48 refs. Nebulizers are widely used for the inhalation of drug solns. in a variety of respiratory diseases. The efficacy of nebulizer therapy is influenced by a great number of factors, including the design of the device and the characteristics of the drug solution Incorrect cleaning, maintenance and disinfection procedures may change the nebulizer performance in time, whereas patient factors can influence the lung deposition of the generated aerosol. In this review the tech. aspects of nebulization of drug solns. will be discussed. Two main parameters are generally used to evaluate the performance of nebulizers: the droplet size distribution of the aerosol and the drug output rate. The droplet size distribution and the drug output rate are basically determined by the design and user conditions of the nebulizer. A higher gas flow of the compressor in a jet nebulizer or a higher vibration frequency of the piezo elec. crystal in an ultrasonic nebulizer, decreases the droplet size. The choice of the type of nebulizer for nebulization of a certain drug solution may initially be based on laboratory evaluation. The major part of the mass or volume distribution

should preferably correspond with aerodynamic particle diams. in the range of 1 to 5 μm. The intended drug output must be realized within a reasonable nebulization time (less than 30 min). From the drug output only a minor fraction will be deposited in the lung. The relation between in vitro and in vivo deposition is only partly understood and to date it has not been possible to predict drug delivery only from in vitro studies on nebulizers. Therefore, studies in patients should be performed before a drug solution for nebulization can be recommended for clin. practice. The mech. properties of nebulizers are likely to change during use. An average utilization time of nebulizers is not available. Therefore, the performance of nebulizers should be checked periodically. Patient compliance in nebulizer therapy is relatively low. This is partly due to the fact that, at present, drug solns. for nebulizers cannot be administered efficiently within a short period of time. More efficient systems should be developed. If possible, nebulizers should be substituted to more efficient systems, e.g. dry powder inhalers or metered dose inhalers.

AN 2000:738259 HCAPLUS <<LOGINID::20081031>>
DN 134:331395
TI A review of the technical aspects of drug nebulization
AU Le Brun, P. P. H.; de Boer, A. H.; Heijerman, H. G. M.; Frijlink, H. W.
CS The hague, 2504 AC, Neth.
SO Pharmacy World & Science (2000), 22(3), 75-81
CODEN: PWSCED; ISSN: 0928-1231
PB Kluwer Academic Publishers
DT Journal; General Review
LA English
RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 7 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Applicability of induced sputum for molecular dosimetry of exposure to inhalatory carcinogens. 32P-postlabeling of lipophilic DNA adducts in smokers and nonsmokers
AB The lung is a major target organ for smoking-associated cancer. The authors examined the applicability of induced sputum for mol. dosimetry of exposure to tobacco smoke-related carcinogens. Sputum induction was performed by inhalation of 4.5% saline delivered from an ultrasonic nebulizer for a period of up to 21 min in a group of smoking (n = 20) and nonsmoking (n = 24) healthy individuals. Samples were analyzed for total and differential cell counts and cell viability. Subsequently, DNA contents of the samples were isolated, and measurement of lipophilic DNA adducts was done by the 32P-postlabeling assay using nuclease P1 (NP1) and BuOH enrichment methods. All subjects tolerated the induction procedure without experiencing any troublesome symptoms, and 90% of smokers (18 of 20) and 88% of nonsmokers (21 of 24) succeeded in producing sufficient amts. of sputum. Total cell counts and percentages of viable cells in smokers were higher than those in nonsmokers (6.7 ± 6.0 vs. 4.7 ± 6.0 + 106, P = 0.40 and 80 ± 15 vs. 63 ± 17, P = 0.01, resp.). In cell differentials, smokers had lower percentages of bronchoalveolar macrophages and higher percentages of neutrophils (69 ± 24 vs. 92 ± 5, P = 0.002 and 26 ± 26 vs. 4 ± 4, P = 0.008, resp.). Using the NP1 digestion method, all smokers and only 1 nonsmoker showed a diagonal radioactive zone in their adduct maps; adduct levels in smokers were higher than those in nonsmokers (3.1 ± 1.4 vs. 0.6 ± 0.8/108 nucleotides; P = 0.0007), and also, adduct levels were significantly related to smoking indexes. Applying the BuOH extraction method, however, only half of the smokers and 3 nonsmokers showed the diagonal radioactive zone in their adduct maps; adduct levels in smokers were higher than those in nonsmokers (4.6 ± 3.7 vs. 1.0 ± 1.9/108 nucleotides; P = 0.02), and the levels of adducts were significantly

related to the smoking indexes. There was a correlation between the levels of adducts determined by the 2 enrichment methods (r = 0.7; P = 0.02). Paired comparison showed no differences between the levels of adducts measured by the 2 methods (P = 0.55). The authors conclude that induced sputum can serve for mol. dosimetry of inhalatory exposure to carcinogens and that the NP1 version of the 32P-postlabeling assay is a choice of preference for studying smoking-induced DNA adducts in the lower respiratory tract.

AN 2000:324709 HCAPLUS <<LOGINID::20081031>>
DN 133:130877
TI Applicability of induced sputum for molecular dosimetry of exposure to inhalatory carcinogens. 32P-postlabeling of lipophilic DNA adducts in smokers and nonsmokers
AU Nia, Ahmad Besarati; Maas, Lou M.; Van Breda, Simone G. J.; Curfs, Danielle M. J.; Kleinjans, Jos C. S.; Wouters, Emiel F. M.; Van Schooten, Frederik J.
CS Department of Health Risk Analysis and Toxicology, Maastricht University, Maastricht, 6200 MD, Neth.
SO Cancer Epidemiology, Biomarkers & Prevention (2000), 9(4), 367-372
CODEN: CEBPE4; ISSN: 1055-9965
PB American Association for Cancer Research
DT Journal
LA English
RE.CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 8 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Inhalation of tobramycin in cystic fibrosis Part 2: Optimization of the tobramycin solution for a jet and an ultrasonic nebulizer
AB The inhalation of tobramycin is part of current cystic fibrosis (CF) therapy. Local therapy with inhaled antibiotics has demonstrated improvements in pulmonary function. Current inhalation therapy is limited by the available drug formulations in combination with the nebulization time. The aim of this study was to develop a highly concentrated tobramycin solution for inhalation. Several tobramycin solns., ranging from 5 to 30% (m/v), were compared after aerosolation with a jet and with an ultrasonic nebulizer. Laser diffraction and cascade impactor anal. were used for characterization of the aerosolized solns. The output rate was determined in volume and mass output per min. From the output rate measurements, it was concluded that a 20% tobramycin solution is the optimal and maximal concentration to be aerosolized. The jet nebulizer was most suitable. Using the jet nebulizer and the 20% solution, it is possible to administer a dosage of 1000 mg tobramycin by inhalation within 30 min.
AN 1999:682975 HCAPLUS <<LOGINID::20081031>>
DN 132:54766
TI Inhalation of tobramycin in cystic fibrosis Part 2: Optimization of the tobramycin solution for a jet and an ultrasonic nebulizer
AU Le Brun, P. P. H.; de Boer, A. H.; Gjaltema, D.; Hagedoorn, P.; Heijerman, H. G. M.; Frijlink, H. W.
CS Central Hospital Pharmacy The Hague, The Hague, 2504 AC, Neth.
SO International Journal of Pharmaceutics (1999), 189(2), 215-225
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier Science B.V.
DT Journal
LA English

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 9 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Effect of inhaled glucocorticoid on the cellular profile and cytokine levels in induced sputum from asthmatic patients
AB Cytokines are considered to play a role in the airway inflammation of bronchial asthma. We examined the cellular profile and cytokine levels in induced sputum samples obtained before and after treatment with beclomethasone dipropionate (BDP, 800 μg/day, for 4 wk) in 12 mild to moderate asthmatic subjects who had not previously received inhaled glucocorticosteroids. Sputum was induced with a 20-min inhalation of 3% saline by an ultrasonic nebulizer. The freshly expectorated sputum separated from the saliva was analyzed for cell counts, for the concentration of interleukin-8 (IL-8), and for the concentration of granulocyte macrophage colony-stimulating factor (GM-CSF). The mean percentage of eosinophils in the sputum samples decreased significantly after BDP treatment, but no significant change in the percentage of neutrophils was observed The mean IL-8 and GM-CSF levels also decreased significantly after treatment. The BDP treatment was associated with an increase in the mean peak expiratory flow (PEF) and with a decrease in the diurnal variation of PEF. These results suggest that inhaled steroids improve airway inflammation and lung function in asthmatics, presumably in part by inhibiting the synthesis of inflammatory cytokines such as IL-8 and GM-CSF.
AN 1999:37120 HCAPLUS <<LOGINID::20081031>>
DN 130:217870
TI Effect of inhaled glucocorticoid on the cellular profile and cytokine levels in induced sputum from asthmatic patients
AU Inoue, H.; Aizawa, H.; Fukuyama, S.; Takata, S.; Matsumoto, K.; Shigyo, M.; Koto, H.; Hara, N.
CS Research Institute for Diseases of the Chest, Faculty of Medicine, Kyushu University, Fukuoka, 812-8582, Japan
SO Lung (1999), 177(1), 53-63
CODEN: LUNGD9; ISSN: 0341-2040
PB Springer-Verlag New York Inc.
DT Journal
LA English
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 10 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Evaluation of atomizer performance in production of respirable spray-dried particles
AB The purpose of this study was to analyze atomizer performance in the production of respirable spray-dried particles. An ultrasonic nebulizer and a plain-jet air-blast atomizer were evaluated in an open cycle, cocurrent spray-drying tower using a 0.5% disodium fluorescein solution The plain-jet air-blast atomizer produced smaller initial droplet sizes (D32 = 4.5-4.8 μm) relative to the ultrasonic nebulizer (D32 = 20-48 μm) over a range of atomizer operating conditions. The air-blast atomizer was selected for further anal. in two spray-drying tower configurations: grounded and electrostatically charged. The spray-dried particles produced by the air-blast atomizer were of a size range (mass median aerodynamic diameter [MMAD] < 1.6 μm) suitable for inhalation. Significant differences were observed for the grounded and electrostatically charged tower configurations, the latter producing the smaller median particle size at the expense of decreased collection efficiency. The electrostatically charged tower was size selective because of diffusion charging, retaining particles with an aerodynamic

diameter (Dae) in the range 1 < Dae < 2 μm. The particle size was reduced with decreasing ambient relative humidity, although a controlled study of this parameter would be required to explicitly define its effects.

AN 1998:753538 HCAPLUS <<LOGINID::20081031>>
DN 130:100633
TI Evaluation of atomizer performance in production of respirable spray-dried particles
AU Dunbar, Craig A.; Concessio, Neville M.; Hickey, Anthony J.
CS Dispersed Systems Laboratory, School of Pharmacy, Chapel Hill, NC, 27599-7360, USA
SO Pharmaceutical Development and Technology (1998), 3(4), 433-441
CODEN: PDTEFS; ISSN: 1083-7450
PB Marcel Dekker, Inc.
DT Journal
LA English
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 11 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Ultrasonic nebulization of cationic lipid-based gene delivery systems for airway administration
AB This study relates to the development of gene therapies for the treatment of lung diseases. It describes for the first time the use of ultrasonic nebulization for administration of plasmid/lipid complexes to the lungs to transfect lung epithelial cells. Plasmid complexed to cationic liposomes at a specific stoichiometric ratio was nebulized using an ultrasonic nebulizer. We assessed: (i) the stability of plasmid and plasmid/lipid complexes to ultrasonic nebulization, (ii) the in vitro activity of plasmid in previously nebulized plasmid/lipid complex, (iii) the in vivo transgene expression in lungs following intratracheal instillation of nebulized plasmid/lipid formulations compared to un-nebulized complexes, (i.v.) the emitted dose from an ultrasonic nebulizer using plasmid/lipid complexes of different size, and (v) the transgene expression in lungs following oral inhalation of aerosolized plasmid/lipid complex generated using an ultrasonic nebulizer. Integrity of plasmid formulated with cationic lipids, and colloidal stability of the plasmid/lipid complex were maintained during nebulization. In contrast, plasmid alone formulated in 10% lactose was fragmented during nebulization. The efficiency of transfection of the complex before and after nebulization was comparable. Nebulization produced respirable aerosol particles. Oral exposure of rodents for 10 min to aerosol produced from the ultrasonic nebulizer resulted in transgene expression in lungs in vivo. The performance characteristics of the ultrasonic nebulizer with our optimized plasmid/lipid formulations suggests that this device can potentially be used for administering gene medicines to the airways in clin. settings for the treatment of respiratory disorders.

AN 1998:750413 HCAPLUS <<LOGINID::20081031>>
DN 130:100484
TI Ultrasonic nebulization of cationic lipid-based gene delivery systems for airway administration
AU Pillai, Ravi; Petrak, Karel; Blezinger, Paul; Deshpande, Deepa; Florack, Valarie; Freimark, Bruce; Padmabandu, Gothami; Rolland, Alain
CS GENE MEDICINE, INC., The Woodlands, TX, 77381-4248, USA
SO Pharmaceutical Research (1998), 15(11), 1743-1747
CODEN: PHREEB; ISSN: 0724-8741
PB Plenum Publishing Corp.
DT Journal
LA English
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 12 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Effect of inhaled surfactant on pulmonary deposition and clearance of technetium-99m-DTPA radioaerosol
AB To establish the effect of an aerosolized synthetic surfactant (Exosurf) on pulmonary 99mTc-diethylenetriamine pentaacetic acid (DTPA) aerosol deposition and clearance, radioaerosol studies were performed at varying times and under varying conditions after surfactant inhalation in canine lungs. Twenty-three dogs had a baseline 99mTc-DTPA study; 2 days later the study was repeated after inhalation of a 1.5-mL/kg dose of Exosurf aerosolized by an ultrasonic nebulizer. The clearance half-time (T1/2) of 99mTc-DTPA from each lung was measured at different times (from 10 min to 3 h) after Exosurf inhalation. For comparison, five animals had a 99mTc-DTPA study 10 min after inhalation of the same dose of saline as Exosurf. An addnl. five animals inhaled a 99mTc-DTPA-Exosurf mixture to investigate the distribution of Exosurf. Technetium-99m-DTPA distributed uniformly without significant changes in penetration indexes before and after inhalation of Exosurf and the 99mTc-DTPA-Exosurf mixture After Exosurf inhalation, 99mTc-DTPA clearance at 10 min (T1/2; 35.6 ± 8.7 min; n = 6) and 40 min (29.4 ± 6.3 min; n = 4) was significantly prolonged compared with the matched baseline values (24.7 ± 6.4 min, p < 0.0001; and 21.7 ± 8.9 min, p = 0.01, resp.). However, later clearance times were not prolonged. By contrast, after saline inhalation, 99mTc-DTPA distributed inhomogeneously, and clearance times (T1/2) were not altered from the matched baseline values. Aerosolized Exosurf distributes homogeneously in the lungs. Exosurf initially retards 99mTc-DTPA aerosol clearance, but 99mTc-DTPA transalveolar clearance returns to baseline rates within 1-2 h. Technetium-99m-DTPA aerosol clearance measurements can be used to monitor the effect of inhaled Exosurf on pulmonary epithelial integrity.
AN 1998:224852 HCAPLUS <<LOGINID::20081031>>
DN 128:280356
OREF 128:55441a,55444a
TI Effect of inhaled surfactant on pulmonary deposition and clearance of technetium-99m-DTPA radioaerosol
AU Suga, K.; Mitra, A.; Domingues, C.; Alderson, P. O.
CS Department of Radiology, Columbia-Presbyterian Medical Center, New York, NY, 10032, USA
SO Journal of Nuclear Medicine (1998), 39(3), 543-547
CODEN: JNMEAQ; ISSN: 0161-5505
PB Society of Nuclear Medicine
DT Journal
LA English
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 13 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Surfactant replacement for respiratory failure induced by inhalation of high-temperature vapor in rats
AB The effects of surfactant replacement on respiratory failure induced by inhalation of high temperature vapor (95-98°) were studied in 44 adult rats weighing 350-430 g. Expts. 1 and 2 were performed under anesthesia with i.p. pentobarbital and mech. ventilation with pure oxygen, 25 cmH2O peak inspiratory pressure, and 7.5 cmH2O pos. end-expiratory pressure. In experiment 1, the rats (n=22) were subjected to inhalation of the vapor for 3.7±1.4 min (.hivin.x±SD). Twenty-five minutes after the inhalation, the animals developed severe respiratory failure: aerial oxygen pressure (PaO2) decreased from 531±43 mmHg (n=22) to 102±31 mmHg (n=22, p<0.01), arterial carbon

dioxide pressure (PaCO2) increased from 27±6 mmHg (n=22) to 47±9 mmHg (n=22, p<0.01), dynamic lung-thorax compliance decreased to 65±12 % (n=22) of the baseline value (p<0.01), and 6.1±3.3 mL/kg (n=22) of lung edema fluid appeared. In the animals in the instillation group (n=11) receiving a bolus instillation of a modified porcine surfactant (100 mg/kg in 2 mL/kg saline) into the trachea, the PaO2 increased with time, reaching 260±113 mmHg (n=11) at 120 min after the instillation (p<0.05 vs. preinstillation value). The instillation of surfactant also led to significant improvements in the values of PaCO2 and dynamic lung-thorax compliance. While in the group (n=11) receiving the same volume of saline alone as a placebo, the values of PaO2, PaCO2 and dynamic lung-thorax compliance did not improve (p <0.05 vs. instillation group). In experiment 2, the rats (n=22) were subjected to inhalation of the high temperature vapor for 4.0±1.7 min (n=22), and the same respiratory failure occurred as in experiment 1. In the animals (n=11) receiving aerosolized surfactant for 60 min through an ultrasonic nebulizer, the PaO2 values increased with time, and reached 211±109 mmHg (n=11) at 120- min after the start of the nebulization (p <0.01 vs. pre-nebulization period), but the PaCO2 and the dynamic lung-thorax compliance did not improve. In the animals (n=11) in experiment 2 not receiving any treatment, none of the findings including PaO2 improved. From these results, it was concluded that inhalation of high temperature vapor in rats induces severe respiratory failure with pulmonary edema, and that surfactant replacement, especially by bolus instillation into the trachea, improves both the blood gas findings and the dynamic lung-thorax compliance.

AN 1998:39948 HCAPLUS <<LOGINID::20081031>>
DN 128:97544
OREF 128:18933a,18936a
TI Surfactant replacement for respiratory failure induced by inhalation of high-temperature vapor in rats
AU Gakiya, Toru
CS Department of Anesthesiology and Intensive Care Medicine, School of Medicine, Kanazawa Univ., Kanazawa, Japan
SO Kanazawa Daigaku Juzen Igakkai Zasshi (1997), 106(4-5), 420-427
CODEN: JUZIAG; ISSN: 0022-7226
PB Juzen Igakkai
DT Journal
LA Japanese

L15 ANSWER 14 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Airway deposition and clearance and systemic pharmacokinetics of amiloride following aerosolization with an ultrasonic nebulizer to normal airways
AB Airway epithelial ion transport is an important component of the airway defense mechanism, and new therapies that target ion transport are being developed. Amiloride is an example of such a new drug, exerting a dose-dependent action to inhibit Na+ transport. Amiloride may be useful in cystic fibrosis, blocking the characteristic airway epithelial Na+ hyperabsorption that occurs in the disease. To evaluate airway and systemic delivery of amiloride via an ultrasonic nebulizer (Omron NE-UO7), we measured the airway surface concns. of amiloride in normal volunteers via a novel approach, together with the systemic pharmacokinetics of amiloride. Direct measurement of airway surface liquid, plasma, and urine amiloride concns. following ultrasonic nebulization. Seven normal subjects were studied in the General Clin. Research Center of the University of North Carolina. Following inhalation with amiloride (1 mg/mL, 4.5 mL) for approx. 12 min, a bronchoscopy was performed. Amiloride deposition and clearance from airway surfaces over 1 h were evaluated by transbronchoscopic sampling using preweighed filter papers. Pulmonary and systemic absorption was

assessed by measuring drug concns. in blood and urine. The mean volume aerosolized was 3.5±0.3 mL during 12 min of aerosolization time; the mean initial concentration of amiloride on airway surfaces after nebulization was
1.6+10-4 mol/L, with an elimination half life of approx. 23 min. Peak plasma concns. of amiloride (30 min, 3.36±0.70 ng/mL) suggest early absorption across lung surfaces, rather than via the GI route. Mean urinary excretion of amiloride over 72 h was 0.63±0.07 mg, with 87% excreted in the first 24 h. The ultrasonic nebulizer rapidly delivers amiloride to normal conducting airways as assessed by the transbronchoscopic sampling technique. Early blood concns. of amiloride probably reflect initial absorption across lung surfaces and are a useful index of the efficiency of the machine.

AN 1997:750988 HCAPLUS <<LOGINID::20081031>>
DN 128:57032
OREF 128:10987a,10990a
TI Airway deposition and clearance and systemic pharmacokinetics of amiloride following aerosolization with an ultrasonic nebulizer to normal airways
AU Noone, Peadar G.; Regnis, Jeff A.; Liu, Xingrong; Brouwer, Kim L. R.; Robinson, Michael; Edwards, Lloyd; Knowles, Michael R.
CS Cystic Fibrosis/Pulmonary Research and Treatment Center, the Division of Pulmonary Medicine, Department of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599-7248, USA
SO Chest (1997), 112(5), 1283-1290
CODEN: CHETBF; ISSN: 0012-3692
PB American College of Chest Physicians
DT Journal
LA English
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 15 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Ultrasonic nebulizers for pulmonary drug delivery
AB A review with refs. Nebulizers are widely used to generate therapeutic aerosols for inhalation therapy. Factors determining aerosol size and drug output from ultrasonic nebulizers are discussed. The mechanism of droplet formation is described in relation to capillary wave production on the surface of the liquid being atomized and the implosion of cavitation bubbles near its surface. There are many com. available ultrasonic nebulizers, and their design is a major factor determining aerosol characteristics and output, in particular the operating frequency of the devices (usually 1-3 MHz), the presence of a fan to assist droplet output and the positioning of baffles. The size of aerosols produced and the rate of fluid output is often larger than comparable jet nebulizers. They also have less tendency to increase the concentration of dissolved solutes. However, the residual or 'dead' volume of fluid is usually larger. The physicochem. properties of fluids for nebulization significantly affect nebulizer performance. Viscosity is particularly important,with an increased viscosity increasing aerosol size but reducing output. Fluids of high viscosity cannot be efficiently atomized. Although most prepns. for nebulization are solns., some suspension formulations are also com. available. Suspensions are generally less efficiently delivered by ultrasonic than jet nebulizers with an inverse relationship between the size of suspended particles and their output. During use, the temperature of fluids in the reservoir of ultrasonic nebulizers increases. This may result in the degradation of heat sensitive materials. However, potentially heat-sensitive products such as proteins and liposomes have been successfully delivered using such devices.
AN 1997:484543 HCAPLUS <<LOGINID::20081031>>
DN 127:166571

OREF 127:32173a,32176a
TI Ultrasonic nebulizers for pulmonary drug delivery
AU Taylor, Kevin M. G.; McCallion, Orla N. M.
CS Centre Materials Science, School Pharmacy, University London, London, WC1N 1AX, UK
SO International Journal of Pharmaceutics (1997), 153(1), 93-104
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier
DT Journal; General Review
LA English
RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 16 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Aerosolization of a chelating agent, Ca-DTPA, for emergent inhalation therapy
AB Methods to make aerosols of chelating agents for the removal of inhaled radioactive particles were examined Four aerosolization methods for Ca-DTPA (I), were examined, viz. the inhaler and dust generator types for dry powder of I and the compressed air nebulizer and the ultrasonic nebulizer types for the aqueous solution of I. The mass median aerodynamic diams. of aerosols made by the inhaler, dust generator, the compressed air nebulizer for 1 g-I/8 solution, the compressed air nebulizer for 1 g-I/80 solution, the ultrasonic nebulizer for 1 g-I/8-80 cm3 solution were more than 40, 8.5, 4-8, 2-4, and 15 μm, resp.
AN 1997:464413 HCAPLUS <<LOGINID::20081031>>
DN 127:126599
OREF 127:24305a,24308a
TI Aerosolization of a chelating agent, Ca-DTPA, for emergent inhalation therapy
AU Yamada, Yuji; Koizumi, Akira; Fukuda, Satoshi
CS Div. Radiotoxicol. Prot., Natl. Inst. Radiol. Sci., Chiba, 263, Japan
SO Hoken Butsuri (1997), 32(2), 167-172
CODEN: HOKBAQ; ISSN: 0367-6110
PB Nippon Hoken Butsuri Gakkai
DT Journal
LA English

L15 ANSWER 17 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Pharmacokinetics of aerosolized tobramycin in adult patients with cystic fibrosis
AB This study was performed to determine the clin. pharmacokinetics of tobramycin in six patients with cystic fibrosis (CF) after inhalation of 600 mg. Tobramycin was administered with an ultrasonic nebulizer (WISTO SENIOR). Blood and urine were sampled until 24 h after inhalation. Maximum tobramycin levels in serum varied from 0.19 to 2.57 mg/L (mean, 1.27 mg/L; standard deviation, 1.07 mg/L). Systemic availability (calculated from urinary output) ranged from 6.0 to 27.4% (mean, 17.5%; standard deviation, 8.8%). The results illustrate that, provided that the systemic availability of tobramycin is a reflection of pulmonary deposition, inhalation studies with CF patients should have a concentration-controlled design. Furthermore, reliance on dose recommendations from the literature for a new patient starting on this treatment is not justified, but it is mandatory that deposition kinetics be studied for each patient and for each nebulizer. It may well be that, with higher levels of deposition, dosages lower than those recommended in the literature will suffice to obtain the desired clin. effect. In addition, the reverse may also be the case.
AN 1997:14288 HCAPLUS <<LOGINID::20081031>>
DN 126:112710
OREF 126:21617a,21620a

TI Pharmacokinetics of aerosolized tobramycin in adult patients with cystic fibrosis
AU Touw, D. J.; Jacobs, F. A. H.; Brimicombe, R. W.; Heijerman, H. G. M.; Bakker, W.; Breimer, D. D.
CS Dep. of Pharmacy Academic Hospital, Vrije Universiteit, Amsterdam, 1007 MB, Neth.
SO Antimicrobial Agents and Chemotherapy (1997), 41(1), 184-187
CODEN: AMACCQ; ISSN: 0066-4804
PB American Society for Microbiology
DT Journal
LA English
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 18 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Change in osmolarity of disodium cromoglycate solution and protection against exercise-induced bronchospasm in children with asthma
AB It has been suggested that osmolarity and/or nebulizer output may affect the protective effects of disodium cromoglycate (DSCG) in asthma. The aim of this study was to evaluate the influence of osmolarity of the DSCG solution on exercise-induced bronchospasm (EIB) in children with bronchial asthma. A jet nebulizer was used for DSCG inhalation in Study 1 and an ultrasonic nebulizer in Study 2. Thirteen asthmatic children (7 males and 6 females, aged 6-14 yr) were enrolled in Study 1, and nine asthmatic children (5 males and 4 females, aged 9-13 yr) in Study 2. After pretreatment with saline (control), hypotonic DSCG or isotonic DSCG, children underwent exercise challenge with a cycle ergometer. The percentage fall in forced expiratory volume in one second (FEV1) was measured at 5 and 15 min postexercise. The data were compared by anal. of variance (ANOVA). Both in Study 1 and Study 2, there were no significant differences in minute ventilation volume or maximum heart rate during exercise between the different treatment groups. Both hypotonic and isotonic DSCG significantly reduced the maximum percentage fall in FEV1. There were no significant differences in protective effects between hypotonic and isotonic DSCG in either study. The authors conclude that the efficacy of hypotonic and isotonic disodium cromoglycate solns. is similar for protection against exercise-induced bronchospasm. Hypotonic disodium cromoglycate seems to be clin. effective for prevention of exercise-induced bronchospasm and treatment of asthmatic children.
AN 1996:611150 HCAPLUS <<LOGINID::20081031>>
DN 125:265607
OREF 125:49297a,49300a
TI Change in osmolarity of disodium cromoglycate solution and protection against exercise-induced bronchospasm in children with asthma
AU Kano, S.; Hirose, T.; Nishima, S.
CS Dept Pediatrics, National Minami-Fukuoka Chest Hospital, Fukuoka, 815, Japan
SO European Respiratory Journal (1996), 9(9), 1891-1895
CODEN: ERJOEI; ISSN: 0903-1936
PB Munksgaard
DT Journal
LA English

L15 ANSWER 19 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Pulmonary functions in HIV-infected patients receiving combined therapy of aerosol procaterol and pentamidine
AB We studied changes in the respiratory functions of HIV-infected patients following pentamidine inhalation therapy, by means of a spirometer before and after pentamidine inhalation and a pulse oximeter during inhalation therapy. The subjects were 12 patients with established HIV infection. Hemophilia was the underlying

disease in all subjects. Each patient inhaled 80 μg of procaterol hydrochloride during approx. the first 5 min, using an ultrasonic nebulizer. The patient then inhaled 300 mg of pentamidine isothianate dissolved in 10 mL of distilled water. The vital capacity (VC) was 4,226.7 ± 577.5 mL before inhalation and 4,171.7 ± 608.0 mL after inhalation. The forced expiratory volume in one second (FEV1.0) was 3,233.3 ± 699.1 mL and 3,253.3 ± 741.8 mL before and after inhalation, resp. The V25/Ht was 0.80 ± 0.32 l/s/m and 0.79 ± 0.35 l/s/m before and after inhalation, resp. None of these parameters differed significantly between pre-and post-inhalation periods. The oxygen saturation (SpO2) decreased in 2 cases during inhalation therapy, but it did not change in any other case. Pulse rate tended to increase during inhalation, although this change was not statistically significant. The most frequent adverse reaction was pharyngeal discomfort caused by the bitter taste of the solution inhaled. No severe adverse reactions were seen. Thus, pentamidine inhalation does not seriously affect the respiratory functions of HIV-infected patients, and it is relatively safe. It is, however, desirable to monitor the oxygen saturation level of individual patients during this therapy.

AN 1996:290473 HCAPLUS <<LOGINID::20081031>>
DN 125:104398
OREF 125:19258h,19259a
TI Pulmonary functions in HIV-infected patients receiving combined therapy of aerosol procaterol and pentamidine
AU Konishi, Mitsuru; Mori, Kei; Yamanaka, Takayo; Maeda, Koichi; Mikasa, Keiichi; Sawaki, Masayoshi; Narita, Nobuhiro; Yoshioka, Akira; Fujimura, Yoshihiro
CS 2nd Dep. Intern. Med., Nara Med. Univ., Kashihara, 634, Japan
SO Nippon Kagaku Ryoho Gakkai Zasshi (1996), 44(4), 227-230
CODEN: NKRZE5; ISSN: 1340-7007
PB Nippon Kagaku Ryoho Gakkai
DT Journal
LA Japanese

L15 ANSWER 20 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Effects of inhalation of aerosolized surfactant on respiratory failure induced by intratracheal endotoxin in rats
AB The effects of inhalation of aerosolized surfactant with various durations on respiratory failure induced by intratracheal endotoxin were studied in 36 adult rats weighing 340-450 g. Each rat was anesthetized with an i.p. injection of pentobarbital and intubated through a tracheotomy. They were mech. ventilated with 100% oxygen with a peak inspiratory pressure of 25 cmH2O, and a pos. end-expiratory pressure of 7.5 cmH2O. Then 56 mg/kg of endotoxin was injected into the trachea. About 180 min after the injection, the animals developed severe respiratory failure similar to adult respiratory distress syndrome (ARDS): the arterial blood oxygen pressure (PaO2) values decreased from 519 mmHg to 82 mmHg, a diffuse shadow appeared in the chest roentgenogram, 4.8 mL/kg of lung edema fluid appeared in the airway and lung compliance decreased. Then the animals were randomly divided into 4 groups. No treatment was performed in the control group, and the mean PaO2 values of this group remained below 80 mmHg throughout the experiment (180 min after separation). A modified natural porcine surfactant was given with ultrasonic nebulizer for 30 min in N-30 group, for 60 min in N-60 group and for 120 min in N-120. Thirty minutes after separation, the PaO2 of the N-30, N-60 and N-120 groups increased to 252 mmHg (vs. control group). The PaO2 of the N-30 and N-60 groups gradually decreased after the end of inhalation, and the values at 180 min after separation were not significantly better than that of the control group. The value of the N-120 group increased to 346 mmHg at 120 min after separation, and

furthermore to 391 mmHg at 180 min after separation (vs. control group). In the N-120 group, the diffuse shadow of the chest roentgenogram almost disappeared. In the N-60 and N-120 groups, the pressure-volume relation of the lung was also significantly better than that of the control group. Histol. examination of the lung revealed that alveoli were larger and more aerated with less leukocytes in the N-120 group than in the control group. By an addnl. experiment with the surfactant and technetium-99m pertechnetate, the dose of aerosolized surfactant delivered to the lung was estimated to reach up to 54 mg/kg in the N-120 group. From these results, it was concluded that inhalation of aerosolized surfactant for 120 min clearly reduced the ARDS-like respiratory failure induced by intratracheal endotoxin. But inhalation for less than 60 min could not deliver sufficient surfactant to reduce respiratory failure.

AN 1995:784246 HCAPLUS <<LOGINID::20081031>>
DN 123:218122
OREF 123:38527a,38530a
TI Effects of inhalation of aerosolized surfactant on respiratory failure induced by intratracheal endotoxin in rats
AU Yamada, Keisuke
CS School Medicine, Kanazawa University, Kanazawa, 920, Japan
SO Kanazawa Daigaku Juzen Igakkai Zasshi (1995), 104(1), 26-35
CODEN: JUZIAG; ISSN: 0022-7226
PB Juzen Igakkai
DT Journal
LA Japanese

L15 ANSWER 21 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI An in vitro technique for calculating the regional dosages of drugs delivered by an ultrasonic nebulizer
AB This study describes an in vitro technique for calculating the dosages of drug delivered to the different regions of the human lung by an ultrasonic nebulizer. The technique uses phase Doppler anemometry to measure particle sizes. Tidal breathing is simulated with a reciprocating pump. Inhalation is divided into an interval in which the sizes of the particles are nearly independent of the relative humidity (RH) of the inlet ambient air and a second interval in which the particles have evaporated The numerical hygroscopic lung deposition model of Stapleton, Finlay, and Zuberbuhler (1994) is used to calculate the regional dosages. The methodol. is applied to the DeVilbiss Aerosonic ultrasonic nebulizer for 2.5 mL nebules of 1 mg mL-1 Ventolin. The dosage of drug delivered to the extra-thoracic, bronchial, and pulmonary regions is 0.42, 0.10, and 0.22 mg, resp., at an inlet RH of 95% and 20°. The corresponding values for RH = 3% are 0.39, 0.097, and 0.22 mg.
AN 1995:705092 HCAPLUS <<LOGINID::20081031>>
DN 123:93232
OREF 123:16457a,16460a
TI An in vitro technique for calculating the regional dosages of drugs delivered by an ultrasonic nebulizer
AU Prokop, R. M.; Finlay, W. H.; Stapleton, K. W.
CS Department Mechanical Engineering, University Alberta, Edmonton, AB, T6G 2G8, Can.
SO Journal of Aerosol Science (1995), 26(5), 847-60
CODEN: JALSB7; ISSN: 0021-8502
PB Elsevier
DT Journal
LA English

L15 ANSWER 22 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Reversible lung lesions in rats due to short-term exposure to ultrafine cobalt particles

AB Using an ultrasonic nebulizer, cobalt aerosols (MMAD = 0.76 μm, σg = 2.1) were generated from an aqueous suspension of ultrafine metallic cobalt particles (Uf-Co) with a primary diameter of 20 nm. Rats were exposed to Uf-Co aerosols at 2.72 mg/m3 for 5 h or at 2.12 mg/m3 for 4 days at 5 h/d. Only min. histopathol. changes were observed in the lungs. Evidence of slight injury was noted, including focal hypertrophy or proliferation of the epithelium in the lower airways, damages of macrophages, intracellular edema of the type I alveolar epithelium, interstitial edema, and proliferation of the type II alveolar epithelium. A new finding in this study was the morphol. transformation of some damaged type I cells to the juvenile form, which appeared to indicate the capability of self-repair of this cell type. The return to a juvenile form seemed to be a key response of type I cells during the early process of repair without cell division following nonlethal injury. Cobalt accumulated in the lungs after inhalation and was transferred rapidly to the blood. In conclusion, inhaled Uf-Co induced reversible pulmonary injury even after short-term exposure.
AN 1993:422432 HCAPLUS <<LOGINID::20081031>>
DN 119:22432
OREF 119:4049a,4052a
TI Reversible lung lesions in rats due to short-term exposure to ultrafine cobalt particles
AU Kyono, Hiroko; Kusaka, Yukinori; Homma, Katsunori; Kubota, Hisayo; Endo-Ichikawa, Yoko
CS Natl. Inst. Ind. Health, Kawasaki, 214, Japan
SO Industrial Health (1992), 30(3-4), 103-18
CODEN: INHEAO; ISSN: 0019-8366
DT Journal
LA English

L15 ANSWER 23 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The effect of 443C81, a μ opioid receptor agonist, on the response to inhaled capsaicin in healthy volunteers
AB Activation of μ opioid receptors on sensory nerves in the lung represents an attractive mechanism for reducing cough and reflex bronchoconstriction. The authors have examined the effect of the peptide 443C81, a peripherally acting μ opioid agonist, on the cough and reflex increase in respiratory resistance (Rrs) produced by capsaicin in nine healthy male volunteers. Using a randomized, double-blind crossover design, each subject inhaled either saline, 1 mg mL-1 443C81 or 4 mg mL-1 443C81 for 10 min from an ultrasonic nebulizer. The cough response to a range of doses of inhaled capsaicin and the increase in Rrs caused by inhalation of a single subtussive dose of capsaicin were measured before and after each treatment. There was no evidence of an effect of either 1 or 4 mg mL-1 443C81 on cough or increase in Rrs produced by capsaicin when compared with the saline placebo. It is concluded that inhalation of this μ opioid receptor agonist had no effect on capsaicin-induced cough or reflex bronchoconstriction in healthy volunteers.
AN 1993:139632 HCAPLUS <<LOGINID::20081031>>
DN 118:139632
OREF 118:23831a,23834a
TI The effect of 443C81, a μ opioid receptor agonist, on the response to inhaled capsaicin in healthy volunteers
AU Choudry, N. B.; Gray, S. J.; Posner, J.; Fuller, R. W.
CS Dep. Clin. Pharmacol., R. Postgrad. Med. Sch., London, W12 0NN, UK
SO British Journal of Clinical Pharmacology (1991), 32(5), 633-6
CODEN: BCPHBM; ISSN: 0306-5251
DT Journal
LA English

L15 ANSWER 24 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Superoxide dismutase activity and lung injury in experimental mice with influenza infection
AB Influenza virus (A/PR8/34) was inoculated into the mice by intranasal inhalation using an ultrasonic nebulizer. Bronchoalveolar lavage fluid (BALF) and blood serum were collected every other day after inoculation. At the same time, the lungs were removed and examined histol. Determination of superoxide dismutase (SOD) activity in BALF and serum was performed using ESR method. The body weight of the infected mice began to decrease on the 3rd day. All the mice had died by the 9th day after inoculation. In lungs from infected mice, inflammatory cell infiltration in the peribronchial tissue was noted on the 1st day and it became more prominent in the subsequent days. From the 5th day after inoculation, atelectatic and emphysematous changes and diffuse edema in alveolar septa appeared. At the initial stage the nos. of macrophages and then of both lymphocytes and neutrophils increased in BALF from infected mice. No difference in the serum SOD activity was noted between infected and non-infected mice, whereas the activity in BALF from infected mice was higher than that from non-infected mice. These results suggest that SOD activity is indicative of the extent and the severity of the lung tissue injury, and that the balance between the amount of superoxide anion (SOA) and activity of SOD induced in response to SOA formation is an important factor in the protection of the virus-infected lung from injury and resulting tissue damage.
AN 1992:405255 HCAPLUS <<LOGINID::20081031>>
DN 117:5255
OREF 117:1087a,1090a
TI Superoxide dismutase activity and lung injury in experimental mice with influenza infection
AU Watanabe, Hisashi
CS Sch. Med., Kurume Univ., Kurume, 830, Japan
SO Kurume Igakkai Zasshi (1991), 54(12), 1075-85
CODEN: KIZAAL; ISSN: 0368-5810
DT Journal
LA Japanese

L15 ANSWER 25 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Inhibitory effect of inhalation of a thromboxane synthetase inhibitor on bronchoconstriction induced by aerosolized leukotriene C4 and thromboxane A2 analog in anesthetized guinea pigs
AB Effect of aerosol administration of a thromboxane synthetase inhibitor (OKY-046) on bronchoconstriction induced by aerosol leukotriene C4, histamine and a thromboxane A2 analog (STA2) was studied in anesthetized, artificially ventilated guinea pigs in order to evaluate the effectiveness of inhalation of OKY-046 on an unfavorable mechanism of secondary release of thromboxane A2. 0.01-1.0 μG/mL leukotriene C4, 25-400 μg/mL histamine and 0.033-1.0 μg/mL STA2 inhaled from an ultrasonic nebulizer developed for small animals caused a dose-dependent increase of pressure at the airway opening (Pao), which is considered to be an index representing bronchial response. Pretreatment of the animals with aerosol OKY-046 (0.035 and 0.35 mg/animal) reduced the airway responses produced by inhalation of leukotriene C4 and STA2, in a dose-dependent manner, while the pretreatment did not affect the histamine dose-response curve. These findings suggest that aerosol leukotriene C4 and STA2 activate thromboxane synthesis, in the airway, and inhalation of OKY-046 may be useful for preventing the secondary release of thromboxane A2, which is an unfavorable mechanism in asthma.
AN 1992:526 HCAPLUS <<LOGINID::20081031>>
DN 116:526

OREF 116:95a,98a
TI Inhibitory effect of inhalation of a thromboxane synthetase inhibitor on bronchoconstriction induced by aerosolized leukotriene C4 and thromboxane A2 analog in anesthetized guinea pigs
AU Fujimura, Masaki; Ogawa, H.; Saito, M.; Sakamoto, S.; Miyake, Y.; Matsuda, T.
CS Sch. Med., Kanazawa Univ., Kanazawa, 920, Japan
SO Allergy (Oxford, United Kingdom) (1991), 46(7), 534-9
CODEN: LLRGDY; ISSN: 0105-4538
DT Journal
LA English

L15 ANSWER 26 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Discriminative stimulus effects of inhaled cocaine in squirrel monkeys
AB Squirrel monkeys (N = 4) were trained with food reinforcement to press one of two levers after administration of i.v. cocaine (0.3 or 1.0 mg/kg) or the other lever after saline. After training, i.v. cocaine (0.03-3.0 mg/kg) produced dose-related increases in the percentage of responses on the cocaine lever (ED50 = 0.15 mg/kg). Cocaine delivered i.m. also produced dose-related increases in cocaine-appropriate responding (ED50 = 0.32 mg/kg), but was approx. half as potent as i.v. cocaine. Similar relative potency relations were obtained for decreases in response rates produced by cocaine. Prior to some sessions subjects were placed in a Plexiglas chamber and exposed for 60 s to cocaine vapor created with an ultrasonic nebulizer. Exposure to vapor from cocaine solns. (1.0-30.0 mg/mL) produced concentration-dependent increases in cocaine-appropriate responding and decreases in response rates. Exposure to vapor from a 30 mg/mL concentration produced virtually exclusive cocaine-appropriate responding. Concentration-effect curves for inhaled cocaine were similar to dose-effect curves obtained when cocaine was administered by the other routes. The time course of the minimally effective concentration of inhaled cocaine was compared to that of the minimally EDs of systemically administered cocaine. Inhaled cocaine had a duration of action longer than i.v. cocaine. The results indicate that inhaled cocaine vapor has effects qual. similar to those of i.v. cocaine, and may have a duration of action longer than that of an i.v. cocaine dose producing a similar degree of drug-appropriate responding.
AN 1991:670547 HCAPLUS <<LOGINID::20081031>>
DN 115:270547
OREF 115:45733a,45736a
TI Discriminative stimulus effects of inhaled cocaine in squirrel monkeys
AU Katz, J. L.; Sharpe, L. G.; Jaffe, J. H.; Shores, E. I.; Witkin, J. M.
CS Addict. Res. Cent., NIDA, Baltimore, MD, 21224, USA
SO Psychopharmacology (Berlin, Germany) (1991), 105(3), 317-21
CODEN: PSCHDL; ISSN: 0033-3158
DT Journal
LA English

L15 ANSWER 27 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Interaction of thromboxane A2 and leukotrienes in guinea pig airways in vivo
AB Effects of a TXA2 receptor antagonist (S 1452) on bronchoconstriction induced by inhaled leukotriene C4 and a leukotriene receptor antagonist (AS 35) on bronchoconstriction caused by inhalation of a TXA2 mimetic (STA 2) were studied in anesthetized, artificially ventilated guinea pigs to examine the interaction of TXA2 and leukotrienes in airways. Leukotriene C4 (0.01-1.0 μg/mL) and STA2 (0.1-1.0 μg/mL) inhaled from ultrasonic nebulizer developed for small animals caused dose-dependent increase of pressure at the airway opening

(Pao) which is considered to be an index representing bronchial response. Pretreatment of the animals with inhaled S 1452 (0.01, 0.033 mg/mL) significantly reduced the airway responses produced by 0.01, 0.033, 0.1, 0.33 and 1.0 μg/mL of leukotriene C4 in a dose-dependent manner, whereas pretreatment with inhaled AS 35 (1 mg) did not affect the STA 2 dose-response curve. These findings suggest that leukotriene C4 activates TXA2 generation, whereas TXA2 does not influence 5-lipoxygenase pathway in the airways.

AN 1991:648711 HCAPLUS <<LOGINID::20081031>>
DN 115:248711
OREF 115:42137a,42140a
TI Interaction of thromboxane A2 and leukotrienes in guinea pig airways in vivo
AU Fujimura, M.; Bando, T.; Mizuhashi, K.; Matsuda, T.
CS Sch. Med., Kanazawa Univ., Kanazawa, 920, Japan
SO Prostaglandins (1991), 42(4), 379-89
CODEN: PRGLBA; ISSN: 0090-6980
DT Journal
LA English

L15 ANSWER 28 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Comparative study of the effects of three angiotensin-converting enzyme inhibitors on the cough reflex
AB To compare the effects of three different angiotensin-converting enzyme (ACE) inhibitors on the cough reflex, capsaicin and citric acid challenge tests were done in normal subjects and hypertensive patients before and after administration of delapril, captopril, or enalapril. Two groups of 7 normal subjects (single dose study: 15 mg delapril, 18.75 mg captopril or 2.5 mg enalapril) and a group of 6 mildly hypertensive patients (1 wk study: cross-over administration of 30 mg/day delapril, 37.5 mg/day captopril, or 5 mg/day enalapril) were studied. Another group of 6 patients with essential hypertension was treated with three ACE inhibitors for 4 wk in a randomized order, with a 2 wk washout period between active therapies. Aerosols of 1 μmol/L and 3 μmol/L capsaicin and 0.68% citric acid in 0.9% NaCl were generated by an ultrasonic nebulizer, and the frequency of cough was counted during inhalation. Delapril treatment result in substantially fewer patients with an increase (≥4 coughs during treatment than during the control period) in the frequency of cough than did captopril treatment. In the 1 and 4 wk studies, enalapril and captopril had substantially more occurrences of increased capsaicin-induced cough than did delapril. These results indicate that delapril has the least cough stimulatory effect among these ACE inhibitors, which may be clin. beneficial.

AN 1991:526647 HCAPLUS <<LOGINID::20081031>>
DN 115:126647
OREF 115:21473a,21476a
TI Comparative study of the effects of three angiotensin-converting enzyme inhibitors on the cough reflex
AU Ogihara, Toshio; Mikami, Hiroshi; Katahira, Katsutoshi; Otsuka, Atsuhiro
CS Med. Sch., Osaka Univ., Osaka, Japan
SO American Journal of Hypertension (1991), 4(1, Pt. 2), 46-51
CODEN: AJHYE6; ISSN: 0895-7061
DT Journal
LA English

L15 ANSWER 29 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Inhalant containing γ-interferon for treatment of adult T-cell leukemia/lymphoma (ATL)
AB An inhalant pharmaceutical composition containing an effective amount of γ-interferon and a physiol. acceptable vehicle for

inhalation is provided for curing or treating ATL; the composition has low side effects. Thus, a com. freeze-dried preparation of γ-interferon was dissolved in water, then diluted with physiol. saline. The preparation obtained was administered to ATL patients by inhalation using an ultrasonic nebulizer. The treatment method of the invention was more effective in ATL treatment than conventional systemic administration of γ-interferon.

AN 1991:254016 HCAPLUS <<LOGINID::20081031>>
DN 114:254016
OREF 114:42755a,42758a
TI Inhalant containing γ-interferon for treatment of adult T-cell leukemia/lymphoma (ATL)
IN Mitsutoshi, Tara
PA Shionogi and Co., Ltd., Japan
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 396903	A2	19901114	EP 1990-106346	19900403 <--
EP 396903	A3	19901205		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 02264730	A	19901029	JP 1989-86320	19890404 <--
JP 2704546	B2	19980126		
US 5171567	A	19921215	US 1990-494216	19900315 <--
PRAI JP 1989-86320	A	19890404 <--		

L15 ANSWER 30 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Effects of flutropium on experimental models of drug- and allergy-induced rhinitis in guinea pigs
AB The effects of flutropium on histamine (Hist)-induced increase in intranasal pressure in non-sensitized guinea pigs and nasal mucosa capillary permeability in passively sensitized guinea pigs were investigated. Flutropium (0.3%), atropine(0.3%), diphenhydramine (0.01%) and cimetidine (0.1%) were directly inhaled into the nasal cavities by an ultrasonic nebulizer for 20 min, followed by inhalation of Hist (0.1%) for 10 min. Flutropium, atropine and diphenhydramine had an inhibitory action on the Hist-induced increase in intranasal pressure in guinea pigs. Cimetidine had no effect on this system. In passively sensitized guinea pigs (the challenge was performed 48 h after sensitization), a 0.1-1.0 mg/kg injection of flutropium (i.v.) dose-dependently inhibited the allergic nasal mucosa capillary permeability. Atropine (10 mg/kg, i.v.) had no inhibitory action on this system. These results suggest that inhalation into the nasal cavities and i.v. injection of flutropium are effective in exptl. models of drug- and allergy-induced rhinitis of the guinea pig.
AN 1991:221127 HCAPLUS <<LOGINID::20081031>>
DN 114:221127
OREF 114:37065a,37068a
TI Effects of flutropium on experimental models of drug- and allergy-induced rhinitis in guinea pigs
AU Mizuno, Hiroyuki; Kawamura, Yutaka; Iwase, Nobuhisa; Ohno, Hiromitsu
CS Cent. Res. Lab. SS, Pharm. Co., Ltd., Narita, 286, Japan
SO Japanese Journal of Pharmacology (1991), 55(3), 321-8
CODEN: JJPAAZ; ISSN: 0021-5198
DT Journal
LA English

L15 ANSWER 31 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Effects of platelet-activating factor on rat airways
AB Effects of platelet-activating factor (PAF) on the rat airways were investigated. Male Wistar rats were anesthetized, and PAF was inhaled into the lungs through a tracheal cannula for 5 min using an ultrasonic nebulizer. The bronchomotor response was measured with a modified Konzett-Rossler method in rats immobilized with decamethonium bromide. The inhalation of PAF caused a marked bronchoconstriction, dose-dependently, in a concentration range of 0.0001-0.01%. The bronchoconstrictor potency of PAF was about 10-fold higher than that of acetylcholine (ACh). On the other hand, histamine inhalation gave only a slight bronchoconstriction even at the high concentration of 0.1%. The bronchomotor response to PAF was accompanied by a marked, sustained decrease in systemic blood pressure, in a dose-dependent manner. Repeated inhalations of PAF (0.001%) at an interval of 60 min resulted in a pronounced tachyphylaxis in the bronchoconstrictor response, but not in the hypotensive response. Combined inhalations of PAF with ACh or histamine did not produce a potentiation by PAF of the bronchoconstrictor responses to ACh and histamine. Thus, PAF is a strong bronchoconstrictor agent in rats and there is no interaction between PAF and other mediators in the acute bronchoconstrictor response.
AN 1988:547802 HCAPLUS <<LOGINID::20081031>>
DN 109:147802
OREF 109:24563a,24566a
TI Effects of platelet-activating factor on rat airways
AU Misawa, Miwa; Takata, Tatsuyuki
CS Sch. Pharm., Hoshi Univ., Tokyo, 142, Japan
SO Japanese Journal of Pharmacology (1988), 48(1), 7-13
CODEN: JJPAAZ; ISSN: 0021-5198
DT Journal
LA English

L15 ANSWER 32 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Secondary release of thromboxane A2 in aerosol leukotriene C4-induced bronchoconstriction in guinea pigs
AB The effect of a thromboxane synthetase inhibitor (OKY 046) on bronchoconstriction induced by aerosol LTC4 and histamine was studied in anesthetized, artificially ventilated guinea pigs in order to examine whether secondary release of TXA2 is produced by aerosol LTC4. LTC4 (0.01-1.0 μg/mL) and histamine (12.5-400 μg/mL) inhaled from ultrasonic nebulizer developed for small animals caused a dose-dependent increase of pressure at the airway opening which is an index representing bronchial response. Pretreatment of the animals with i.v. OKY 046 (100 mg/kg) decreased the airway responses produced by inhalation of 0.1, 0.33, and 1.0 μg LTC4/mL, whereas the pretreatment did not affect the histamine dose-response curve. Apparently, aerosol LTC4 activates the arachidonate cyclooxygenase pathway, including TXA2 synthesis, and the released cyclooxygenase products have bronchodilating effects as a whole.
AN 1988:198927 HCAPLUS <<LOGINID::20081031>>
DN 108:198927
OREF 108:32541a,32544a
TI Secondary release of thromboxane A2 in aerosol leukotriene C4-induced bronchoconstriction in guinea pigs
AU Fujimura, Masaki; Miyake, Yasushi; Uotani, Kohhei; Kanamori, Kazunori; Matsuda, Tamotsu
CS Sch. Med., Kanazawa Univ., Kanazawa, Japan
SO Prostaglandins (1988), 35(3), 427-35
CODEN: PRGLBA; ISSN: 0090-6980
DT Journal
LA English

L15 ANSWER 33 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Automatic control of aerosol concentrations in exposure chambers
AB A method that would permit setting and automatically regulating mist concentration in a chamber for the purpose of conducting aerosol inhalation, expts. on small laboratory animals was developed. H_2SO_4 mist was generated from an ultrasonic nebulizer widely used for inhalation studies. First, the ultrasonic nebulizer was remodeled in such a way that the solution temperature and volume in the inner chamber would not vary during operation since the generation rate of mist depends upon these factors. Moreover, using a thermal mass flow control valve equipped with an ejector and PID-controller, mist concentration in the exposure chamber could be controlled automatically at a set point for up to 8 h. Particle size of the mist did not change when mist concentration was set at different levels.
AN 1988:50723 HCAPLUS <<LOGINID::20081031>>
DN 108:50723
OREF 108:8357a,8360a
TI Automatic control of aerosol concentrations in exposure chambers
AU Hirano, Seishiro
CS Environ. Health Sci. Div., Natl. Inst. Environ. Stud., Yatabe, 305, Japan
SO American Industrial Hygiene Association Journal (1958-1999) (1987), 48(12), 972-6
CODEN: AIHAAP; ISSN: 0002-8894
DT Journal
LA English

L15 ANSWER 34 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The effect of inhaled leukotriene D4, histamine, or antigen on central and peripheral airways of guinea pigs: analysis of bronchograms with an interactive image analysis system
AB The effect on guinea pig airways of the inhalation of leukotrienes, histamine, or antigen was investigated by measuring changes in lung volume and analyzing the airway area on bronchograms with the Zeiss interactive image anal. system. LTC4, LTD4, LTE4, and histamine inhaled through an ultrasonic nebulizer caused inflation of the lung: LTD4 was the most potent of the leukotrienes and was 100 times more potent than histamine on a molar basis. The results of analyses of areas of large and small bronchi and bronchioles on the bronchograms indicated that LTD4 selectively decreased the area of the peripheral airways. Inhalation of an antigen in actively sensitized animals resulted in inflation of the lung and in a selective decrease in the area of the peripheral airways. Anaphylactic bronchoconstriction provoked by antigen inhalation was clearly inhibited by AA-861, a 5-lipoxygenase inhibitor but not significantly by mepyramine, an antihistamine. Thus, LTD4 is a potent constrictor of the peripheral airways in guinea pigs. The anaphylactic bronchoconstriction provoked by antigen inhalation may be mediated by LTD4 in actively sensitized guinea pigs.
AN 1987:574097 HCAPLUS <<LOGINID::20081031>>
DN 107:174097
OREF 107:27935a,27938a
TI The effect of inhaled leukotriene D4, histamine, or antigen on central and peripheral airways of guinea pigs: analysis of bronchograms with an interactive image analysis system
AU Ashida, Yasuko; Nomura, Masaji; Kuriki, Hisashi; Maki, Yoshitaka
CS Biol. Lab., Takeda Chem. Ind. Ltd., Osaka, 532, Japan
SO European Journal of Pharmacology (1987), 141(2), 299-304
CODEN: EJPHAZ; ISSN: 0014-2999
DT Journal
LA English

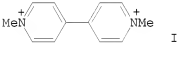
L15 ANSWER 35 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Nebulization and selective deposition of LTD4 in human lungs
AB The concentration of LTD4 in a saline solution decreased by approx. 90% after 2 min
of nebulization in a DeVilbiss 35B ultrasonic nebulizer
. This decrease was prevented by diluting LTD4 in a phosphate buffer, pH 7.4. Nebulization of tritiated LTD4 in this phosphate buffer did not cause any appreciable deterioration of the leukotriene, as demonstrated by an unchanged ratio between radioactivity and LTD4 concentration in the test solution
before and after nebulization as well as in the condensed aerosol. The aerosol generated by the DeVilbiss 35B ultrasonic
nebulizer generated particles with a mass median diameter of 1.3 μ (dry particle size). Interposition of a settling bag reduced the amount of large particles, reducing the mass median diameter to 0.84 μ (dry particle size). Healthy volunteers were challenged on sep. days with 40 nmol LTD4 or 100 μmol histamine, and the changes in 1-s forced expiratory flow rate (FEV1) and partial flow volume curves initiated at 50% of vital capacity (Vmax30) were measured. A relative diffuse deposition pattern was ensured by inhalation via a settling bag. These results were compared to challenges with a relatively central deposition pattern as ensured by inhalation directly from the nebulizer with brisk inhalation maneuvers. The diffuse deposition pattern caused minimal changes in FEV1 but pronounced effect in Vmax30. The effects of LTD4 and histamine on FEV1 and Vmax30 changed in parallel when the deposition of the mediators was changed to a more central pattern. This indicates that the 2 mediators do not differ with respect to any selective effects on different parts of the airways.
AN 1987:490772 HCAPLUS <<LOGINID::20081031>>
DN 107:90772
OREF 107:14722h,14723a
TI Nebulization and selective deposition of LTD4 in human lungs
AU Bisgaard, Hans; Poulsen, L.; Soendergaard, I.
CS Finsen Inst., Rigshosp., Copenhagen, DK-1601, Den.
SO Allergy (Oxford, United Kingdom) (1987), 42(5), 336-42
CODEN: LLRGDY; ISSN: 0105-4538
DT Journal
LA English

L15 ANSWER 36 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Lung clearance of inhaled 99mTc-DTPA in the dog
AB The reproducibility of measuring an index of permeability of respiratory epithelium in dogs was studied using aerosolized 99mTc-DTPA. The method uses a gamma camera to measure the rate of clearance of soluble radioactive aerosol deposited in the lung. A solution of 99mTc-DTPA in normal saline was aerosolized by an ultrasonic nebulizer. Anesthetized
dogs breathing spontaneously inhaled the resulting droplets for 2 min. Mass median aerodynamic diameter of the droplets was 4.4 μm with a geometric standard deviation of 2.1. Clearance from the lung was monitored by quant. gamma camera imaging for up to 2 h. For a 60-min observation period, the biol. half-life for clearance of 99mTc-DTPA from both lungs was 66 min. Apical regions cleared slower than basal regions, probably because of a larger portion of bronchial tissue in the apical region of the dog's lung. The best reproducibility of absorption of 99mTc-DTPA in the dogs was obtained from basal regions and peripheral zones of the lung within 30 min after inhalation of the radioaerosol.
AN 1984:546897 HCAPLUS <<LOGINID::20081031>>
DN 101:146897
OREF 101:22197a,22200a
TI Lung clearance of inhaled 99mTc-DTPA in the dog

AU Oberdoerster, G.; Utell, M. J.; Weber, D. A.; Ivanovich, M.; Hyde, R. W.; Morrow, P. E.
CS Sch. Med. Dent., Univ. Rochester, Rochester, NY, 14642, USA
SO Journal of Applied Physiology: Respiratory, Environmental and Exercise Physiology (1984), 57(2), 589-95
CODEN: JARPDU; ISSN: 0161-7567
DT Journal
LA English

L15 ANSWER 37 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI A new inhalational animal model for alcohol addiction and withdrawal reactions
AB Five 8-h exposures to 25 mg EtOH [64-17-5]/L, delivered as a 0.2-3 μ mist from an ultrasonic nebulizer, decreased EtOH tolerance in rats, hastened the occurrence of intoxication, and induced voluntary drinking of 12% EtOH in a liquid diet. Two-6 wk after the last inhalation exposure the rats ingested approx. 7 g EtOH/kg, and 8-12 wk after the last exposure the EtOH ingestion was approx. 5 g/kg. The rats were unable to maintain their balance above 25° inclination after 12 wk of EtOH drinking. The growth rate of the EtOH-drinking rats was decreased. Repeated treatment with EtOH mist after 12 wk of EtOH drinking raised the rate of subsequent EtOH ingestion to 8 g/kg. The rats then did not significantly decrease the EtOH consumption and lost the ability to swim.
AN 1979:81623 HCAPLUS <<LOGINID::20081031>>
DN 90:81623
OREF 90:12853a,12856a
TI A new inhalational animal model for alcohol addiction and withdrawal reactions
AU Cohn, Major L.; Cohn, Marthe; Baginski, Helen
CS Univ. Pittsburgh Sch. Med., Pittsburgh, PA, USA
SO Crit. Concerns Field Drug Abuse, Proc. Natl. Drug Abuse Conf., 3rd (1978), Meeting Date 1976, 1239-45. Editor(s): Schecter, Arnold; Alksne, Harold; Kaufman, Edward. Publisher: Dekker, New York, N. Y.
CODEN: 39WIA2
DT Conference
LA English

L15 ANSWER 38 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Paraquat lung injury in rabbits
GI



I

AB New Zealand rabbits, exposed to 10 g paraquat (I) [4685-14-7]/100 mL for 2 h via ultrasonic nebulizer died within 38 h. Most animals in a 2nd group which received 5 weekly 2 h exposures to 200 mg I/100 mL and survived >3 exposures showed significant reduction in arterial O tension and an increase in alveolar-arterial O gradient. There was evidence of I accumulation after repeated inhalation. The lung damage was extensive. The 3rd group receiving 10 mg I/mL over 3 mo was indistinguishable from the control. Repeated inhalation of I aerosol induced dose-related interstitial pneumonitis and fibrosis in rabbits. I lung damage may be useful in the study of pathogenesis of pulmonary fibrosis.

```
AN   1978:574717  HCAPLUS <<LOGINID::20081031>>
DN   89:174717
OREF 89:27055a,27058a
TI   Paraquat lung injury in rabbits
AU   Seidenfeld, J. J.; Wycoff, D.; Zavala, D. C.; Richerson, H. B.
CS   Univ. Hosp., Iowa City, IA, USA
SO   British Journal of Industrial Medicine (1978), 35(3), 245-57
     CODEN: BJIMAG; ISSN: 0007-1072
DT   Journal
LA   English


=> d hi

'HI' IS NOT A VALID FORMAT FOR FILE 'HCAPLUS'

The following are valid formats:

ABS --------- GI and AB
ALL --------- BIB, AB, IND, RE
APPS -------- AI, PRAI
BIB --------- AN, plus Bibliographic Data and PI table (default)
CAN --------- List of CA abstract numbers without answer numbers
CBIB -------- AN, plus Compressed Bibliographic Data
CLASS ------- IPC, NCL, ECLA, FTERM
DALL -------- ALL, delimited (end of each field identified)
DMAX -------- MAX, delimited for post-processing
FAM --------- AN, PI and PRAI in table, plus Patent Family data
FBIB -------- AN, BIB, plus Patent FAM
IND --------- Indexing data
IPC --------- International Patent Classifications
MAX --------- ALL, plus Patent FAM, RE
PATS -------- PI, SO
SAM --------- CC, SX, TI, ST, IT
SCAN -------- CC, SX, TI, ST, IT (random display, no answer numbers;
              SCAN must be entered on the same line as the DISPLAY,
              e.g., D SCAN or DISPLAY SCAN)
STD --------- BIB, CLASS

IABS -------- ABS, indented with text labels
IALL -------- ALL, indented with text labels
IBIB -------- BIB, indented with text labels
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

HIT --------- Fields containing hit terms
HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT)
              containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and
              its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
              its structure diagram
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FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
OCC --------- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field
codes.  For a list of the display field codes, enter HELP DFIELDS at
an arrow prompt (=>).  Examples of formats include: TI; TI,AU; BIB,ST;
TI,IND; TI,SO.  You may specify the format fields in any order and the
information will be displayed in the same order as the format
specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR,
FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC
to view a specified Accession Number.
ENTER DISPLAY FORMAT (BIB):ti

L15  ANSWER 1 OF 38  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Effect of catechin inhalation therapy on control of MRSA


=> d his

     (FILE 'HOME' ENTERED AT 14:17:37 ON 31 OCT 2008)

     FILE 'HCAPLUS' ENTERED AT 14:17:49 ON 31 OCT 2008
L1             0 S DANAPROID
L2           164 S DANAPAROID
L3        137794 S PULMONARY OR ASTHMA OR COPD OR (CHRONIC OBSTRUCTIVE PULMONARY
L4             7 S L2 AND L3
L5           422 S JET MILLING
L6             0 S L2 AND L5
L7             4 S ULTRASONIC NEBULISER
L8           550 S ULTRASONIC NEBULIZER
L9             0 S L2 AND L8
L10        41338 S INHALATION OR INHALEABLE
L11        42345 S INHALATION OR INHALABLE
L12           19 S L5 AND L11
L13           60 S L8 AND L11
L14            6 S L12 AND (PY<2003 OR AY<2003 OR PRY<2003)
L15           38 S L13 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> log hold
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   179.24     179.45

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                   -44.00     -44.00

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:22:06 ON 31 OCT 2008

Connecting via Winsock to STN



Welcome to STN International!  Enter x:X
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LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 14:25:53 ON 31 OCT 2008
FILE 'HCAPLUS' ENTERED AT 14:25:53 ON 31 OCT 2008
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	179.24	179.45

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-44.00	-44.00

```
=> s spray(w)(drier or dried or drying)
        150477 SPRAY
         12822 DRIER
        434146 DRIED
        347126 DRYING
L16      23208 SPRAY(W)(DRIER OR DRIED OR DRYING)

=> s l8 and l16
L17          3 L8 AND L16

=> d l17 1-3 ti abs bib

L17  ANSWER 1 OF 3  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Aerosol Synthesis of Inhalation Particles via a Droplet-to-Particle Method
AB   Inhalation powders with consistent particle properties, including particle
     size, size distribution, and shape were produced with an aerosol synthesis
     method.  Compared to conventional spray drying, the
     aerosol method provides better control of the thermal history and
     residence time of each droplet and product particle due to the laminar
     flow in the heated zone of the reactor where the droplet drying and
     particle formation take place.  A corticosteroid, beclomethasone
     dipropionate, generally used for asthma treatment was chosen as a
     representative material to demonstrate the process.  Spherical particles
     were produced with a droplet-to-particle method from an ethanolic
     precursor solution  The droplets produced with an ultrasonic
     nebulizer were carried to a heated zone of the reactor at
     50-150°C where the solvent was evaporated and dry particles formed.
     The mass mean diameter of the particles were well within the respirable size
     range (approx. 2 μm).  The geometric standard deviation (GSD) of produced
     particles was approx. 2.  The particle surface structure varied from
     smooth to rough depending on the degree of particle crystallinity and was
     affected by the thermal history of the particle.  Amorphous particles with
     smooth surface were most likely obtained due to the rapid evaporation of the
     solvent from the droplet combined with the slow diffusion of the
     beclomethasone dipropionate mol.  The amorphous particles were transformed
     slowly to crystalline particles in the open atmospheric  In addition, the
particle
     surface structure changed from smooth to rough during storage.  The
     process was accelerated by thermal post-annealing.  However, addnl.
     heating also increased particle sintering.  By optimizing the reactor
     parameters, and thus increasing the mol. diffusion, stable, crystalline
     particles were produced at 150°C.
AN   2006:12142  HCAPLUS <<LOGINID::20081031>>
DN   144:239508
TI   Aerosol Synthesis of Inhalation Particles via a Droplet-to-Particle Method
```

AU Laehde, A.; Raula, J.; Kauppinen, E. I.; Watanabe, W.; Ahonen, P. P.; Brown, D. P.
CS Center for New Materials, Helsinki University of Technology, Finland
SO Particulate Science and Technology (2006), 24(1), 71-84
CODEN: PTCHDS; ISSN: 0272-6351
PB Taylor & Francis, Inc.
DT Journal
LA English
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Evaluation of atomizer performance in production of respirable spray-dried particles
AB The purpose of this study was to analyze atomizer performance in the production of respirable spray-dried particles. An ultrasonic nebulizer and a plain-jet air-blast atomizer were evaluated in an open cycle, cocurrent spray-drying tower using a 0.5% disodium fluorescein solution The plain-jet air-blast atomizer produced smaller initial droplet sizes (D32 = 4.5-4.8 μm) relative to the ultrasonic nebulizer (D32 = 20-48 μm) over a range of atomizer operating conditions. The air-blast atomizer was selected for further anal. in two spray-drying tower configurations: grounded and electrostatically charged. The spray-dried particles produced by the air-blast atomizer were of a size range (mass median aerodynamic diameter [MMAD] < 1.6 μm) suitable for inhalation. Significant differences were observed for the grounded and electrostatically charged tower configurations, the latter producing the smaller median particle size at the expense of decreased collection efficiency. The electrostatically charged tower was size selective because of diffusion charging, retaining particles with an aerodynamic diameter (Dae) in the range 1 < Dae < 2 μm. The particle size was reduced with decreasing ambient relative humidity, although a controlled study of this parameter would be required to explicitly define its effects.
AN 1998:753538 HCAPLUS <<LOGINID::20081031>>
DN 130:100633
TI Evaluation of atomizer performance in production of respirable spray-dried particles
AU Dunbar, Craig A.; Concessio, Neville M.; Hickey, Anthony J.
CS Dispersed Systems Laboratory, School of Pharmacy, Chapel Hill, NC, 27599-7360, USA
SO Pharmaceutical Development and Technology (1998), 3(4), 433-441
CODEN: PDTEFS; ISSN: 1083-7450
PB Marcel Dekker, Inc.
DT Journal
LA English
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Manufacture of high-purity lead-containing oxide ceramic powder
AB The title powder is prepared by forming droplets from a solution containing metal components and halogen, drying and/or thermal decomposition of the droplets to form powder, treating the powder hydrothermally, then mixing the powder with Pb compound, and calcining at 600-1000°. Thus, 1.02 mol/L aqueous ZrCl2 and 1.63 mol/L aqueous TiCl4 were mixed at Zr/Ti atomic ratio 0.52:0.48, then diluted 5-fold with H2O, formed into droplets by an ultrasonic nebulizer, and carried by air to a furnace heated at 600° to form powder. The resulting powder was hydrothermally treated at

800°, mixed with PbO powder and acetone, and calcined at 780° for 1 h to obtain Pb1.01 (Zr 0.52Ti0.48)O5 ceramic powder. A sintered body from the powder had a d. of 7.97 g/cm3, which is close to its theor. d.

AN 1987:582003 HCAPLUS <<LOGINID::20081031>>
DN 107:182003
OREF 107:29121a,29124a
TI Manufacture of high-purity lead-containing oxide ceramic powder
IN Takagi, Toichi; Ametani, Kohei; Shimizu, Koichi
PA Denki Kagaku Kogyo K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62148323	A	19870702	JP 1985-288011	19851223
PRAI JP 1985-288011		19851223		

=> d his

(FILE 'HOME' ENTERED AT 14:17:37 ON 31 OCT 2008)

FILE 'HCAPLUS' ENTERED AT 14:17:49 ON 31 OCT 2008

L1	0	S	DANAPROID
L2	164	S	DANAPAROID
L3	137794	S	PULMONARY OR ASTHMA OR COPD OR (CHRONIC OBSTRUCTIVE PULMONARY
L4	7	S	L2 AND L3
L5	422	S	JET MILLING
L6	0	S	L2 AND L5
L7	4	S	ULTRASONIC NEBULISER
L8	550	S	ULTRASONIC NEBULIZER
L9	0	S	L2 AND L8
L10	41338	S	INHALATION OR INHALEABLE
L11	42345	S	INHALATION OR INHALABLE
L12	19	S	L5 AND L11
L13	60	S	L8 AND L11
L14	6	S	L12 AND (PY<2003 OR AY<2003 OR PRY<2003)
L15	38	S	L13 AND (PY<2003 OR AY<2003 OR PRY<2003)
L16	23208	S	SPRAY(W)(DRIER OR DRIED OR DRYING)
L17	3	S	L8 AND L16

=> log hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	190.66	190.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-46.40	-46.40

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:26:43 ON 31 OCT 2008

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```
Welcome to STN International!  Enter x:X

LOGINID:SSPTAEXO1623

PASSWORD:
  * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 15:06:03 ON 31 OCT 2008
FILE 'HCAPLUS' ENTERED AT 15:06:03 ON 31 OCT 2008
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                  190.66     190.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                  -46.40     -46.40

=> s dry powder inhaler
        504859 DRY
        610714 POWDER
          2495 INHALER
L18        613 DRY POWDER INHALER
               (DRY(W)POWDER(W)INHALER)

=> s dextran or dextrin or glucose or mannitol
         39775 DEXTRAN
         20068 DEXTRIN
        461006 GLUCOSE
         38682 MANNITOL
L19     539785 DEXTRAN OR DEXTRIN OR GLUCOSE OR MANNITOL

=> s l18 or l19
L20     540341 L18 OR L19

=> s l18 and l19
L21         57 L18 AND L19

=> s l21 and (PY<2003 or AY<2003 or PRY<2003)
      22959121 PY<2003
       4499363 AY<2003
       3967608 PRY<2003
L22         17 L21 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l22 1-17 ti abs bib

L22  ANSWER 1 OF 17  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Predicting the Quality of Powders for Inhalation from Surface Energy and
     Area
AB   The purpose of the study was to correlate the surface energy of active and
     carrier components in an aerosol powder to in vitro performance of a
     passive dry powder inhaler.  Inverse gas
     chromatog. (IGC) was used to assess the surface energy of active
     (albuterol and ipratropium bromide) and carrier (lactose monohydrate,
     trehalose dihydrate and mannitol) components of a dry
     powder inhaler formulation.  Blends (1%weight/weight) of drug
     and carrier were prepared and evaluated for dry powder
     inhaler performance by cascade impaction.  The formulations were
     tested with either of two passive dry powder inhalers, Rotahaler
     (GlaxoSmithKline) or Handihaler (Boehringer Ingelheim).  In vitro
     performance of the powder blends was strongly correlated to surface energy
```

interaction between active and carrier components. Plotting fine particle fraction vs. surface energy interaction yielded an R2 value of 0.9283. Increasing surface energy interaction between drug and carrier resulted in greater fine particle fraction of drug. A convincing relationship, potentially useful for rapid formulation design and screening, was found between the surface energy and area parameters derived from IGC and dry powder inhaler performance.

AN 2002:730018 HCAPLUS <<LOGINID::20081031>>
DN 139:12089
TI Predicting the Quality of Powders for Inhalation from Surface Energy and Area
AU Cline, David; Dalby, Richard
CS Department of Pharmaceutical Sciences, University of Maryland, Baltimore, MD, 21201, USA
SO Pharmaceutical Research (2002), 19(9), 1274-1277
CODEN: PHREEB; ISSN: 0724-8741
PB Kluwer Academic/Plenum Publishers
DT Journal
LA English
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Spray dried powders for pulmonary or nasal administration
AB A formulation for pulmonary or nasal administration comprises a mixture of particles of 2 or more drugs or excipients produced by spray drying and suitable for administration without further processing of the particles. Spherical particles 1-5 μ in size and formed directly by spray-drying with salbutamol sulfate 120 parts and ipatropium bromide 20 parts by weight were prepared The larger proportion of salbutamol acted as an agent to cover the ipatropium bromide and so prevent moisture uptake by the ipatropium bromide. The increased weight of the particle compared to the ipatropium alone gave better content uniformity of the lower dose drug. The particles were either suspended in a mixture of P134a and/or P227 with a cosolvent (EtOH) or a surfactant as appropriate in a metered dose aerosol inhaler, or were mixed with lactose as a flow aid in a metered dose dry powder inhaler, or used as received from the spray dryer in a capsule for insufflation.
AN 2002:488054 HCAPLUS <<LOGINID::20081031>>
DN 137:52413
TI Spray dried powders for pulmonary or nasal administration
IN Woolfe, Austen John; Zing, Xian Ming; Langford, Alan
PA Norton Healthcare Ltd., USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of U.S. Ser. No. 643,145, abandoned.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20020081266	A1	20020627	US 2001-930109	20010814 <--
PRAI	US 1999-150095P	P	19990820	<--	
	US 2000-643145	B2	20000821	<--	

L22 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Solid peptide preparations for inhalation and their production
AB The invention relates to solid peptide prepns., particularly for the inhalation to mammals, to their production, and to their use, for example, in powder inhalators. Drug substances are ground at low temperature in inert solvents; the solvents are removed after the procedure. Solvents are

hydrocarbons, and fluorinated hydrocarbons. Thus cetrorelixacetate was ground in HFA 227 at -60°C using a double-walled bead mill; the solvent was evaporated; the average particle diameter was 2.5 μm; the peptide impurities increased by 0.08%; and 96 μg/g zircon oxide abrasion from the beads were found. The cetrorelixacetate powder (1.03 g) was suspended in 200 g liquid TG227 at -50°C and added to a suspension of 8.96 g SpheroLac 100 in 50 g HFA227. The solvent was evaporated from the mixture; the free-flowing cetrorelixacetate-lactose mixture was filled in MDPI cartridges.

AN 2002:171654 HCAPLUS <<LOGINID::20081031>>
DN 136:221718
TI Solid peptide preparations for inhalation and their production
IN Lizio, Rosario; Damm, Michael; Sarlikiotis, Werner; Wolf-Heuss, Elisabeth
PA Sofotec Gmbh & Co. Kg, Germany
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002017882	A1	20020307	WO 2001-EP9538	20010818 <--
W: AU, BG, BR, BY, CN, CO, CZ, EE, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LT, LV, MK, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, UZ, YU, ZA, AM, AZ, MD, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
DE 10043509	A1	20020314	DE 2000-10043509	20000901 <--
AU 2001095483	A	20020313	AU 2001-95483	20010818 <--
EP 1313452	A1	20030528	EP 2001-976109	20010818 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, TR				
CA 2356786	A1	20020301	CA 2001-2356786	20010831 <--
US 20020122826	A1	20020905	US 2001-944060	20010831 <--
US 20050014677	A1	20050120	US 2004-808239	20040323 <--
PRAI DE 2000-10043509	A	20000901 <--		
WO 2001-EP9538	W	20010818 <--		
US 2001-944060	B1	20010831 <--		

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Medical electropowders for inhalers
AB A method and a process are disclosed for preparation of medical electro-powders. The electro-powder results from prepns. of chemical and biol. substances to form electro-powders suitable for electrostatic charging and dosing for functionality in a dry powder inhaler device. The electro-powder resulting from the method and process forms an active powder substance or a dry powder medical formulation with a fine particle fraction representing of the order 50 or more of the content having a size ranging between 0,5-5 μm and provides electrostatic properties with an absolute specific charge per mass after charging of the order 0.1x10-6 to 25x10-6 C/g and presenting a charge decay rate constant Q50 > 0.1 s with a tap d. of less than 0.9 g/mL and a water activity aw of less than 0.5. In the processing the active substance is a generally pharmacol. active chemical or biol. substance, for instance a polypeptide or any other corresponding substance selected alone or mixed or blended together with one or more excipients being a compound to improve electrostatic properties of the medical dry powder substance or dry powder medical formulation. Further the electro-powder may even be formed as a micro-encapsulation by coating micronized powder with the

excipient in such a way that the active substance is capsulated whereby the powder electrostatic properties mainly comes from the excipient. Terbutaline sulfate, used for asthma treatment, was micronized and analyzed for particle size.

AN 2002:122837 HCAPLUS <<LOGINID::20081031>>
DN 136:189346
TI Medical electropowders for inhalers
IN Nilsson, Thomas; Nilsson, Lars-Gunnar
PA Microdrug A.-G., Switz.
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2002011803	A1	20020214	WO 2001-SE1682	20010727	<--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW					
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
	SE 516555	C2	20020129	SE 2000-2822	20000804	<--
	SE 2000002822	A	20020129			
	US 6696090	B1	20040224	US 2000-636548	20000811	<--
	CA 2417225	A1	20020214	CA 2001-2417225	20010727	<--
	AU 2001082743	A	20020218	AU 2001-82743	20010727	<--
	EP 1309369	A1	20030514	EP 2001-961481	20010727	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
	BR 2001012903	A	20030701	BR 2001-12903	20010727	<--
	JP 2004505685	T	20040226	JP 2002-517135	20010727	<--
	AU 2001282743	B2	20050407	AU 2001-282743	20010727	<--
	IN 2003MN00124	A	20050204	IN 2003-MN124	20030127	<--
PRAI	SE 2000-2822	A	20000804	<--		
	WO 2001-SE1682	W	20010727	<--		

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Inhalant powder formulations containing saccharides
AB A powder formulation for administration by inhalation comprises a drug and an excipient. The formulation has the form of a phys. mixture and comprises 5-25% excipient, and the drug has a particle size distribution of 0.5-10 μm, and where the excipient has a particle size distribution of 15-500 μm. Thus, a Colistin dry powder inhaler
fulfills the aims with respect to released fine particle dose. The performance of the inhaler was independent of the amount and size range of the lactose (excipient) fraction and the particle size distribution 2 of the aerosol cloud was also good at flow rates below 60 L/min.
AN 2001:617796 HCAPLUS <<LOGINID::20081031>>
DN 135:170806
TI Inhalant powder formulations containing saccharides
IN Heijerman, Hendrikus Gerardus Maria; Le Brun, Petrus Paulus Hendricus; Frijlink, Henderik Willem; De Boer, Anne Haaije
PA Rijksuniversiteit Groningen, Neth.
SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001060341	A1	20010823	WO 2001-NL133	20010219 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1129705	A1	20010905	EP 2000-200550	20000217 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	EP 1257260	A1	20021120	EP 2001-908465	20010219 <--
	EP 1257260	B1	20040721		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	AT 271383	T	20040815	AT 2001-908465	20010219 <--
	PT 1257260	T	20041231	PT 2001-908465	20010219 <--
	US 20030053960	A1	20030320	US 2002-223707	20020819 <--
	US 7344734	B2	20080318		
PRAI	EP 2000-200550	A	20000217 <--		
	WO 2001-NL133	W	20010219 <--		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Salmeterol and fluticasone propionate given as a combination. Lack of systemic pharmacodynamic and pharmacokinetic interactions
AB Objective: To investigate the potential for systemic pharmacodynamic and pharmacokinetic interactions between inhaled salmeterol and fluticasone propionate when repeat doses of the two drugs are given in combination to healthy subjects. Methods: Twenty-eight healthy subjects received salmeterol 100 μg, salmeterol 100 μg/fluticasone propionate 500 μg and fluticasone propionate 500 μg via a Diskus dry powder inhaler twice daily for 11 days according to a randomized, double-blind, placebo-controlled, crossover design. Subjects in the placebo group also received a single dose of salmeterol 100 μg on the morning of day 10. On day 10, the systemic effects of salmeterol [on pulse rate, blood pressure, corrected QT (QTc) interval and serum potassium and glucose levels] and fluticasone propionate (on 24-h urinary cortisol and morning plasma cortisol levels) were assessed. Maximal number and affinity of lymphocyte β2-adrenoceptors and β2-adrenoceptor polymorphism at loci 16 and 27 were also determined Plasma pharmacokinetics of salmeterol and fluticasone propionate were determined after the morning dose on day 10. Dosing continued on the evening of day 10 and on day 11, and on day 12 the effect of repeat-dose treatment with salmeterol and salmeterol/fluticasone propionate on the systemic effects of cumulative doses of inhaled salbutamol (up to a total dosage of 3200 μg) was evaluated. Results: All treatments were safe and well tolerated. With the exception of a higher pulse rate after repeat administration of salmeterol [66.2 beats per min (bpm) vs. 63.6 bpm], there were no significant differences between the single-dose and repeat-dose salmeterol groups. The systemic pharmacodynamic effects of inhaled salmeterol were not affected by the co-administration of fluticasone propionate. Eleven

days of treatment with salmeterol induced tachyphylaxis to the systemic effects of cumulative doses of salbutamol; however, co-administration of fluticasone propionate did not affect the response to salbutamol. Fluticasone propionate reduced 24-h urinary cortisol excretion (22.4 μg compared with 48.6 μg with placebo), but this was unaffected by the co-administration of salmeterol. Morning plasma cortisol levels were not reduced compared with placebo. There was no significant treatment effect on lymphocyte β2-adrenoceptors and no correlation of β2-adrenoceptor polymorphism at loci 16 and 27 with the development of tachyphylaxis. Šalmeterol plasma concns. were measurable only during the first half-hour after dosing. Co-administration of fluticasone propionate did not affect the peak plasma concentration (Cmax) of salmeterol. For fluticasone propionate, there were no statistically significant differences between salmeterol/fluticasone propionate and fluticasone propionate with respect to Cmax, plasma concentration at the end of the dosing interval (Ct), terminal elimination half-life (t1/2) or time to Cmax (tmax). The area under the concentration-time curve within a dosing interval (AUCt) for fluticasone propionate after inhalation of salmeterol/fluticasone propionate was statistically significantly higher (about 8%) than after inhalation of fluticasone propionate alone (P=0.0135). However, the 90% confidence intervals (CIs) for the AUCt and Cmax ratios for the two treatments were within the accepted limits for bioequivalence (1.03, 1.13 and 0.97, 1.12, resp.). Conclusion: These results in healthy subjects indicate that there is no systemic pharmacodynamic or pharmacokinetic interaction between inhaled salmeterol and fluticasone propionate when given in combination.

AN 2001:157419 HCAPLUS <<LOGINID::20081031>>
DN 135:220589
TI Salmeterol and fluticasone propionate given as a combination. Lack of systemic pharmacodynamic and pharmacokinetic interactions
AU Kirby, S.; Falcoz, C.; Daniel, M. J.; Milleri, S.; Squassante, L.; Ziviani, L.; Ventresca, G. P.
CS Department of Clinical Pharmacology, GlaxoWellcome Research and Development, Middlesex, Greenford, UB6 0HE, UK
SO European Journal of Clinical Pharmacology (2001), 56(11), 781-791
CODEN: EJCPAS; ISSN: 0031-6970
PB Springer-Verlag
DT Journal
LA English
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The 24-h effect of mannitol on the clearance of mucus in patients with bronchiectasis
AB Aim of this study was to investigate the acute effect of mannitol on the clearance of mucus, and (1) the 24-h mucus retention, and (2) the mucus clearance rate and lung function 24 h after inhalation of a single dose of mannitol. Clearance of mucus was measured on 3 consecutive days using 99mTc-sulfur colloid radio-aerosol and a gamma camera. Mannitol, 330 ± 68 mg (mean± SD), was inhaled using a dry powder inhaler only on day 2.
Eight patients with bronchiectasis (age range, 29 to 70 yr). Measurements and results: On each day, lung images were collected over 2 h and at 24 h. Key findings of the study are as follows: (1) the 24-h retention of mucus was reduced the day after mannitol had been inhaled, compared to the day without mannitol (day 1) in the whole right lung (57.6 ± 6.2% vs. 68.1 ± 5.9%), central (47.5 ± 6.7% vs. 56.9 ± 6.5%), intermediate (61.7 ± 5.6% vs. 73.8 ± 5.5%), and peripheral regions (70.9 ± 4.3% vs. 86.6 ± 4.6%)($p < 0.02$); and (2)

mannitol helped patients clear mucus within 2 h that might otherwise take up to 24 h, from the whole right lung and defined regions. However, clearance over 60 min measured 24 h after mannitol inhalation was not significantly different to baseline clearance without mannitol (8.7 ± 1.9% on day 1 vs. 9.7 ± 3.7% 24 h after mannitol; p > 0.8). The patients maintained the same lung function the day before and after mannitol had been inhaled: FEV1 (percent predicted), 79 ± 5 on day 1 vs. 80 ± 5 on day 3; and forced expiratory flow, mid-expiratory phase (percent predicted), 50 ± 6 on day 1 vs. 51 ± 6 on day 3; p > 0.6. Mannitol inhalation acutely increases clearance of mucus, and this effect extends beyond the acute study period, resulting in decreased mucus retention at 24 h.

AN 2001:154805 HCAPLUS <<LOGINID::20081031>>
DN 135:162335
TI The 24-h effect of mannitol on the clearance of mucus in patients with bronchiectasis
AU Daviskas, Evangelia; Anderson, Sandra D.; Eberl, Stefan; Chan, H-Kim; Young, Iven H.
CS Department of Respiratory Medicine, Royal Prince Alfred Hospital, Camperdown, 2050, Australia
SO Chest (2001), 119(2), 414-421
CODEN: CHETBF; ISSN: 0012-3692
PB American College of Chest Physicians
DT Journal
LA English
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Powders consisting of particles with a perfectly smooth surface, for use as carriers for the preparation of inhalation mixtures with micronized drugs and method for their preparation
AB Carriers for use in the preparation of mixts. for inhalation powders intended for pulmonary administration of micronized drugs by means of a dry powder inhaler and the method for their preparation are described. An inhalation powder of beclometasone dipropionate mixed with smoother α-lactose monohydrate carrier was prepared
AN 2001:63851 HCAPLUS <<LOGINID::20081031>>
DN 134:120962
TI Powders consisting of particles with a perfectly smooth surface, for use as carriers for the preparation of inhalation mixtures with micronized drugs and method for their preparation
IN Caponetti, Giovanni; Catellani, Pier Luigi; Bettini, Ruggero; Colombo, Paolo; Ventura, Paolo
PA Chiesi Farmaceutici S.p.A., Italy
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001005429	A2	20010125	WO 2000-EP6690	20000713 <--
	WO 2001005429	A3	20011004		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,				

CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

IT	99MI1582	A1	20010116	IT 1999-MI1582	19990716 <--
EP	1196146	A2	20020417	EP 2000-956180	20000713 <--
EP	1196146	B1	20060913		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY

BR	2000012351	A	20020611	BR 2000-12351	20000713 <--
AT	339191	T	20061015	AT 2000-956180	20000713 <--
ES	2272313	T3	20070501	ES 2000-956180	20000713 <--
US	6780508	B1	20040824	US 2002-30686	20020416 <--
US	20050118113	A1	20050602	US 2004-806240	20040323 <--
US	7399528	B2	20080715		
PRAI IT	1999-MI1582	A	19990716	<--	
WO	2000-EP6690	W	20000713	<--	
US	2002-30686	A1	20020416	<--	

L22 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Dry powder for inhalation
AB The moisture resistance of dry powder formulations for inhalation, which contain a pharmaceutically inert carrier of noninhalable particle size and a finely divided pharmaceutical substance of inhalable particle size, is improved and the storage stability of the formulations is increased by adding Mg stearate to minimize the deleterious effect of moisture on fine particle dose and fine particle fraction even under relatively extreme temperature and humidity conditions. Thus, 198.46 g lactose-H2O (particle size 100% <200 μm, 50% <125 μm, 10% <75 μm) was mixed with 1 g sieved Mg stearate, then with 0.54 g formoterol fumarate-2H2O, and loaded into a multidose dry powder inhaler.
AN 2000:351357 HCAPLUS <<LOGINID::20081031>>
DN 133:9107
TI Dry powder for inhalation
IN Keller, Manfred; Mueller-Walz, Rudi
PA Skyepharma A.-G., Switz.
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000028979	A1	20000525	WO 1999-CH528	19991110 <--

W: AU, CA, CN, CZ, HU, IN, JP, NO, NZ, PL, RO, RU, SK, US, ZA
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

CA 2347856	A1	20000525	CA 1999-2347856	19991110 <--
AU 9964578	A	20000605	AU 1999-64578	19991110 <--
AU 756852	B2	20030123		
EP 1131059	A1	20010912	EP 1999-952212	19991110 <--
EP 1131059	B1	20030305		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, RO

HU 2001004226	A2	20020228	HU 2001-4226	19991110 <--
HU 2001004226	A3	20031229		
HU 226164	B1	20080528		
JP 2002529498	T	20020910	JP 2000-582027	19991110 <--
NZ 511527	A	20021025	NZ 1999-511527	19991110 <--
EP 1283036	A1	20030212	EP 2002-25796	19991110 <--
EP 1283036	B1	20080102		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY

AT 233550	T	20030315	AT 1999-952212	19991110 <--

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     PT 1131059           T     20030731    PT 1999-952212          19991110 <--
     ES 2192866           T3    20031016    ES 1999-952212          19991110 <--
     RU 2221552           C2    20040120    RU 2001-116074          19991110 <--
     SK 284889            B6    20060202    SK 2001-632             19991110 <--
     EP 1862164           A2    20071205    EP 2007-116946          19991110 <--
          R:  AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC,
              NL, PT, SE
     AT 382386            T     20080115    AT 2002-25796           19991110 <--
     ES 2298323           T3    20080516    ES 2002-25796           19991110 <--
     IN 2001KN00479       A     20060324    IN 2001-KN479           20010501 <--
     ZA 2001003627        A     20010509    ZA 2001-3627            20010504 <--
     NO 2001002346        A     20010626    NO 2001-2346            20010511 <--
     US 6645466           B1    20031111    US 2001-831011          20010809 <--
     US 20040202616       A1    20041014    US 2003-628965          20030728 <--
     US 7186401           B2    20070306
     US 20070212422       A1    20070913    US 2007-714339          20070305 <--
PRAI CH 1998-2286         A     19981113  <--
     EP 1999-952212       A3    19991110  <--
     EP 2002-25796        A3    19991110  <--
     WO 1999-CH528        W     19991110  <--
     US 2001-831011       A1    20010809  <--
     US 2003-628965       A3    20030728
RE.CNT  8      THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22  ANSWER 10 OF 17  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Aerosolized active agent delivery
AB   Methods and devices are provided for delivering an active agent
     formulation to the lung of a human patient.  The active agent formulation
     may be in dry powder or nebulized form or in admixt. with a propellant,
     and is delivered at an inspiratory flow rate of <17 L/min.  The
     bioavailability of the active agent was increased at these flow rates when
     compared to inspiratory flow rates of ≥17 L/min, owing to increased
     deposition of active agent in the lung.  The preferred flow rate was 5-10
     L/min, and was achieved by use of a flow restricter comprising an aperture
     or set of apertures and a valving arrangement.  Thus, powdered spray-dried
     insulin, inhaled from a com. dry powder
     inhaler at 9.1 L/min, gave greater blood glucose level
     control, a greater peak blood insulin level, and a shorter time to peak
     insulin level than when it was inhaled at ≥17 L/min.
AN   1999:613743  HCAPLUS <<LOGINID::20081031>>
DN   131:248246
TI   Aerosolized active agent delivery
IN   Clark, Andrew; Foulds, George H.
PA   Inhale Therapeutic Systems, Inc., USA
SO   PCT Int. Appl., 31 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI   WO 9947196           A1    19990923    WO 1999-US4654         19990311 <--
          W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
              DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
              KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
              MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
              TR, TT, UA, UG, UZ, VN, YU, ZW
          RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
              ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
              CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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     CA 2322045           A1    19990923    CA 1999-2322045         19990311 <--
     CA 2322045           C     20070710
     AU 9929803           A     19991011    AU 1999-29803           19990311 <--
     AU 750539            B2    20020718
     BR 9908771           A     20001212    BR 1999-8771            19990311 <--
     EP 1066074           A1    20010110    EP 1999-911071          19990311 <--
          R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO
     TR 200002692         T2    20010221    TR 2000-2692            19990311 <--
     HU 2001000848        A2    20010628    HU 2001-848             19990311 <--
     SI 20413             A     20010630    SI 1999-20017           19990311 <--
     LT 4818              B     20010725    LT 2000-200000095       19990311 <--
     EE 200000546         A     20020215    EE 2000-546             19990311 <--
     JP 2002506697        T     20020305    JP 2000-536435          19990311 <--
     US 20030183228       A1    20031002    US 1999-266720          19990311 <--
     AP 1342              A     20041215    AP 2000-1902            19990311 <--
     NZ 506289            A     20041224    NZ 1999-506289          19990311 <--
     RO 121834            B1    20080630    RO 2000-909             19990311 <--
     TW 228998            B     20050311    TW 1999-88103965        19990315 <--
     ZA 9902100           A     20000111    ZA 1999-2100            19990316 <--
     BG 104720            A     20010430    BG 2000-104720          20000828 <--
     BG 65091             B1    20070228
     MX 2000PA08994       A     20010622    MX 2000-PA8994          20000913 <--
     HR 2000000608        A1    20010430    HR 2000-608             20000915 <--
     LV 12586             B     20010420    LV 2000-129             20000922 <--
     AU 2002301461        A1    20030306    AU 2002-301461          20021015 <--
     US 20050090798       A1    20050428    US 2003-627591          20030725 <--
     AU 2006201914        A1    20060525    AU 2006-201914          20060508 <--
     AU 2006201914        B2    20080724
PRAI US 1998-78212P       P     19980316  <--
     US 1998-78214P       P     19980316  <--
     AU 1999-29803        A3    19990311  <--
     US 1999-266720       A1    19990311  <--
     WO 1999-US4654       W     19990311  <--
     AU 2002-301461       A3    20021015  <--
RE.CNT  6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22  ANSWER 11 OF 17  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   The extrapulmonary effects of increasing doses of formoterol in patients
     with asthma
AB   The cardiovascular and metabolic responses to increasing doses of
     formoterol administered from a dry powder
     inhaler were assessed.  Twenty patients with mild to moderate
     asthma were given 12, 24, 48 and 96 μg of formoterol or a matched
     placebo on sep. days.  The doses were administered using a randomized,
     cross-over, double-blind design.  The effects on heart rate, blood
     pressure, electromech. systole (QS2I), the electrocardiog. QTc interval,
     plasma potassium (K); blood glucose and FEV1 were assessed prior
     to, and for 9 h following each dose.  There was no difference between the
     maximum effects of formoterol 12 μg and placebo; the 24 μg dose
     significantly decreased plasma K (-0.2 mmol · l-1) and increased
     blood glucose (1.8 mmol · l-1) compared to placebo.  The
     two highest doses affected most of the variables with the 96 μg dose
     being significantly different from placebo for all indexes, heart rate (9
     beats · min-1), systol BP (4 mmHg), diastolic BP (-3 mmHg), QS2I
     (-11 ms), QTc (17 ms), plasma K (-0.5 mmol · l-1) and blood
     glucose (2.6 mmol · l-1).  All doses of formoterol
     increased FEV1.  Although there were dose-dependent effects on the
     extrapulmonary measurements, only the effects at the highest dose may be
     of clin. significance.
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AN 1998:252442 HCAPLUS <<LOGINID::20081031>>
DN 129:90191
OREF 129:18427a,18430a
TI The extrapulmonary effects of increasing doses of formoterol in patients with asthma
AU Burgess, C. D.; Ayson, M.; Rajasingham, S.; Crane, J.; Della Cioppa, G.; Till, M. D.
CS Department of Medicine, Wellington School of Medicine, Wellington, 7343, N. Z.
SO European Journal of Clinical Pharmacology (1998), 54(2), 141-147
CODEN: EJCPAS; ISSN: 0031-6970
PB Springer-Verlag
DT Journal
LA English
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Spray-dried microparticles as therapeutic vehicles for use in gene therapy
AB Microparticles, which are smooth and spherical, and at least 90 % of which have a volume median particle size of 1 to 10 μm, comprise a substantially uniform mixture of an agent for gene therapy and an excipient. For example, a naked or encapsulated gene can thus be administered, using a dry powder inhaler. A plasmid pCMV promoter:luciferase gene was reconstituted with 3β-[N-(N,N-dimethylaminoethyl)carbamoyl]cholesterol/dioleoylphosphatidylethanolamine at a charge ratio of 5:1 and spray dried.
AN 1997:672265 HCAPLUS <<LOGINID::20081031>>
DN 127:298774
OREF 127:58295a,58298a
TI Spray-dried microparticles as therapeutic vehicles for use in gene therapy
IN Sutton, Andrew Derek; Ogden, Jill Elizabeth; Johnson, Richard Alan
PA Andaris Ltd., UK; Sutton, Andrew Derek; Ogden, Jill Elizabeth; Johnson, Richard Alan
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9736578	A1	19971009	WO 1997-GB953	19970403 <--
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2250478	A1	19971009	CA 1997-2250478	19970403 <--
AU 9723020	A	19971022	AU 1997-23020	19970403 <--
AU 715512	B2	20000203		
ZA 9702837	A	19980403	ZA 1997-2837	19970403 <--
EP 936902	A1	19990825	EP 1997-915601	19970403 <--
EP 936902	B1	20030618		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000507568	T	20000620	JP 1997-535066	19970403 <--
AT 243027	T	20030715	AT 1997-915601	19970403 <--
PT 936902	T	20031128	PT 1997-915601	19970403 <--
ES 2201283	T3	20040316	ES 1997-915601	19970403 <--

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     NO 9804462          A     19980925    NO 1998-4462          19980925 <--
PRAI GB 1996-7035        A     19960403  <--
     WO 1996-GB1379      A     19960607  <--
     WO 1997-GB953       W     19970403  <--
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L22 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The deposition of spray-dried β-galactosidase from dry powder inhaler devices
AB The object of this study was to evaluate the in vitro deposition properties of a model spray-dried protein (β-galactosidase) from a dry powder inhaler device (ISF inhaler). The stabilized spray-dried protein was evaluated alone and when blended with equal wts. of (a) Avicel and (b) mannitol. The deposition properties were studied after exposure to environments of varying humidity using a twin impinger and a cascade impactor. The spray-dried material was extremely sensitive to humidity, with large redns. in respirable fraction occurring after storage at 43% relative humidity. The presence of a nonhygroscopic carrier (mannitol) did not prevent this reduction There was no significant difference between the ests. of respirable fraction obtained using the cascade impactor and twin impinger for the material which had been stored for some time. However, for the powders which had been exposed to environment of 43% relative humidity, the twin impinger was more reliable, as the cascade impactor results were adversely affected by entrainment of aggregates in the air stream.
AN 1996:483919 HCAPLUS <<LOGINID::20081031>>
DN 125:150942
OREF 125:28087a,28090a
TI The deposition of spray-dried β-galactosidase from dry powder inhaler devices
AU Broadhead, J.; Rouan, S. K. Edmond; Thodes, C. T.
CS Dep. Applied Pharmaceutical Sciences, Univ. Rhode Island, Kingston, RI, 02881, USA
SO Drug Development and Industrial Pharmacy (1996), 22(8), 813-822
CODEN: DDIPD8; ISSN: 0363-9045
PB Dekker
DT Journal
LA English

L22 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Proliposome powders for inhalation
AB A proliposome powder comprises discrete particles of a biol. active component in a single phase together with a lipid or mixture of lipids having a phase transition temperature of below 37°. Rofleponide palmitate 10, dipalmitoyl phosphatidylcholine 63, dimyristoyl phosphatidylcholine 24, and Na dipalmitoyl phosphatidylglycerol 3 parts were dissolved in 1300 parts tert-BuOH at 80° and the solution was freeze-dried. The obtained powder was micronized to a particle size <5 μm and mixed with lactose·H2O . The mixture was homogenized, agglomerated, and filled into a dry powder inhaler.
AN 1996:483650 HCAPLUS <<LOGINID::20081031>>
DN 125:123753
OREF 125:23032h,23033a
TI Proliposome powders for inhalation
IN Bystroem, Katarina; Nilsson, Per-Gunnar
PA Astra Aktiebolag, Swed.
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9619199	A1	19960627	WO 1995-SE1560	19951220	<--
	W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ					
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
	ZA 9510751	A	19960624	ZA 1995-10751	19951218	<--
	IN 1995DE02347	A	20070223	IN 1995-DE2347	19951218	<--
	IL 116454	A	20020310	IL 1995-116454	19951219	<--
	TW 508248	B	20021101	TW 1995-84113555	19951219	<--
	CA 2208517	A1	19960627	CA 1995-2208517	19951220	<--
	AU 9643605	A	19960710	AU 1996-43605	19951220	<--
	AU 693632	B2	19980702			
	EP 800383	A1	19971015	EP 1995-942357	19951220	<--
	EP 800383	B1	20030514			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, LT, LV					
	CN 1171047	A	19980121	CN 1995-196978	19951220	<--
	CN 1087932	C	20020724			
	HU 77628	A2	19980629	HU 1998-352	19951220	<--
	BR 9510512	A	19980707	BR 1995-10512	19951220	<--
	JP 10510830	T	19981020	JP 1995-519738	19951220	<--
	CZ 286469	B6	20000412	CZ 1997-1948	19951220	<--
	RU 2162689	C2	20010210	RU 1997-112399	19951220	<--
	EE 3592	B1	20020215	EE 1997-134	19951220	<--
	PL 184393	B1	20021031	PL 1995-320825	19951220	<--
	AT 240095	T	20030515	AT 1995-942357	19951220	<--
	PT 800383	T	20030731	PT 1995-942357	19951220	<--
	ES 2194931	T3	20031201	ES 1995-942357	19951220	<--
	SK 284918	B6	20060202	SK 1997-814	19951220	<--
	EG 23683	A	20070509	EG 1995-1060	19951221	<--
	US 6045828	A	20000404	US 1996-617918	19960320	<--
	NO 9702847	A	19970619	NO 1997-2847	19970619	<--
	NO 320434	B1	20051205			
	FI 9702653	A	19970820	FI 1997-2653	19970619	<--
PRAI	SE 1994-4466	A	19941222	<--		
	SE 1995-2369	A	19950630	<--		
	WO 1995-SE1560	W	19951220	<--		

L22 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Influence of excipients and storage humidity on the deposition of disodium cromoglycate (DSCG) in the Twin Impinger

AB The in vitro deposition pattern of disodium cromoglycate (DSCG) from a unit dose dry powder inhaler device (Microhaler) was investigated using the Twin Impinger. Four excipients with differing particle sizes, two α-lactose monohydrate grades (Pharmatose 325 M, x50 = 56.3 μm and Granulac 220, x50 = 15.6 μm) and two dextrose monohydrate grades (Roferose FF, x50 = 102.8 μm and Roferose SF, x50 = 37.4 μm), were mixed with DSCG in the ratio 1 plus 1 and 1 plus 4 at low relative humidity. Loose spherical agglomerates were formed in a rotating drum and then the mixts. were filled into hard gelatin capsules size 3 and stored at 33 and 55% RH, resp. The deposition pattern was investigated using the Twin Impinger at a flow rate of 60 l/min. The amount of DSCG deposited in the lower impingement chamber, corresponding to a particle size of ≤6.4 μm, was markedly influenced by the humidity level during storage. In all expts., the fine particle fraction from mixts. stored at 33% RH was higher compared to

those stored at 55% RH. Mixts. containing 1 part DSCG plus 1 part excipient showed higher deposition rates than the 4+1 mixts. Excipients with a smaller mean particle diameter gave a higher DSCG deposition in the lower impingement chamber. Best results were obtained with the 1+1 mixts. of DSCG and fine lactose (Granulac 220) with 41% and DSCG and fine glucose (Roferose SF) with 38%, resp. The results indicate that dry powder inhalations can be optimized by appropriate selection of the excipient, because its particle size distribution and its proportion in a formulation in combination with the storage humidity are important factors determining the inhalation fraction of a formulation.

AN 1996:347892 HCAPLUS <<LOGINID::20081031>>
DN 125:95748
OREF 125:17835a,17838a
TI Influence of excipients and storage humidity on the deposition of disodium cromoglycate (DSCG) in the Twin Impinger
AU Braun, Martin A.; Oschmann, R.; Schmidt, Peter. C.
CS Department of Pharmaceutical Technology, Eberhard Karls University, Auf der Morgenstelle 8, Tubingen, D-72076, Germany
SO International Journal of Pharmaceutics (1996), 135(1,2), 53-62
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier
DT Journal
LA English

L22 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Saccharides as aerosol carriers
AB Pharmaceutical excipients useful in dry powder inhalants comprise particles having a rugosity (measured by air permeametry) of less than 1.75. The use of these carriers increases the amount of drug ingested by the patient using a dry powder inhaler. The preferred excipients are crystalline sugars such as lactose which may conveniently be prepared by controlled crystallization from an aqueous medium. For example, micronized beclomethasone dipropionate was mixed with recrystd. lactose in the ratio of 1:67.5. Examination by electron microscopy showed that the steroid was distributed evenly over the surface of the lactose.

AN 1995:347188 HCAPLUS <<LOGINID::20081031>>
DN 122:114990
OREF 122:21395a,21398a
TI Saccharides as aerosol carriers
IN Ganderton, David; Kassem, Nuha M.
PA British Technology Group Ltd., UK
SO U.S., 6 pp. Cont.-in-part of U.S. 5,254,330.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5376386	A	19941227	US 1992-873941	19920427 <--
WO 9111179	A1	19910808	WO 1991-GB103	19910124 <--
W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, PL, RO, SD, SE, SU, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
AU 9171559	A	19910821	AU 1991-71559	19910124 <--
AU 635616	B2	19930325		
EP 464171	A1	19920108	EP 1991-902428	19910124 <--
EP 464171	B1	19931215		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 04504427	T	19920806	JP 1991-502631	19910124 <--

	JP 3100626	B2	20001016		
	AT 98487	T	19940115	AT 1991-902428	19910124 <--
	CA 2049302	C	20010529	CA 1991-2049302	19910124 <--
	US 5254330	A	19931019	US 1991-762007	19910920 <--
	NO 9103731	A	19911121	NO 1991-3731	19910923 <--
PRAI	WO 1991-GB103	A	19910124	<--	
	US 1991-762007	A2	19910920	<--	
	GB 1990-1635	A	19900124	<--	
	EP 1991-902428	A	19910124	<--	

L22 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Development and use of an in vitro system to evaluate inhaler devices

AB An in vitro system was developed to better emulate particle deposition in the respiratory tract. Inhalers were connected to a glass throat (BP 1988 Appendix XVII C) or to a silicone throat that exactly duplicated the surface geometry of the oral and pharyngeal cavity. This throat was created from a direct impression of the mouth and CAT scans of a patient's head and neck and could be separated into three parts. This allowed deposition patterns to be observed Adapters were fabricated so that the outlet of either throat could be connected to a collection filter unit or any one of several sizing instruments. A mass flow meter enabled airflow to be monitored. Airflow was produced from a vacuum pump or by human inhalation. A Rotahaler was tested using capsules containing 20 mg of spray dried mannitol:sorbitol:carboxyfluorescein (CF) 10:1:0.01 of 3.4 μm MMAD. The vacuum pump was set at 30, 60 or 120 l/min air flow for 4 s. The surface of the glass or silicone throat was left 'dry' or was coated with a polyethylene glycol mixture to better represent the 'wet' surface of the oral cavity. Powder in the device, filter unit and throat(s) was quantified by assay of the CF using spectrofluorimetry. The recovery of the weighed dose was 98.6 ± 8.9% (n = 83). The dose emerging from the inhaler was dependent on the flow rate and was 1.0 ± 0.2 mg (30 l/min, n = 25), 5.1 ± 0.5 mg (60 l/min, n = 30) and 6.2 ± 0.6 mg (120 l/min, n = 28). However, the percentage of this dispensed dose recovered from the filter unit (lung) was independent of the flow rate and only varied with the type and condition of the throat used. The mass deposition in the throats was ranked: glass-dry < silicone-dry < glass-wet < silicone-wet. The results indicate that the use of a wet artificial throat, modeled on human anatomy, will provide a more conservative estimate of lung deposition compared to a glass throat when used with a dry powder inhaler.

AN 1994:62247 HCAPLUS <<LOGINID::20081031>>

DN 120:62247

OREF 120:11125a,11128a

TI Development and use of an in vitro system to evaluate inhaler devices

AU Niven, Ralph W.; Lott, Fred D.; Ip, Anna Y.; Somaratne, kanchana D.; Kearney, Malcolm

CS Amgen Inc., Thousand Oaks, CA, 91320, USA

SO International Journal of Pharmaceutics (1994), 101(1-2), 81-7
CODEN: IJPHDE; ISSN: 0378-5173

DT Journal

LA English